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THE RELATION BETWEEN BRAIN WEIGHT AND THE TIME
REQUIRED FOR HABIT FORMATION IN THE ALBINO RAT.

A DISSERTATION
SUBMITTED TO THE BOARD OF UNIVERSITY STUDIES OF
THE JOHNS HOPKINS UNIVERSITY
IN CONFORMITY WITH THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

BY

GARDNER CHENEY BASSET.

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ACKNOWLEDGMENTS.

Before entering upon the body of this presentation I desire to express my obligations to those without whose cooperation my experiments would have been of less value.

Above all am I indebted to Professor John B. Watson, Director of the Johns Hopkins Psychological Laboratory, who has kept himself informed of the progress of my experimentation and who has been ready at all times with helpful suggestions and encouragement.

To Dr. Henry H. Donaldson I owe much: for suggesting the experiment; for placing the facilities and material of the Wistar Institute at my disposal; for much helpful advice as to the evaluation of my results.

To Dr. Shinkishi Hatai for preparing the anatomical data referring to the rats used in my experiments.

To Dr. Helen L. King for keeping her sequences of inbreeding moving so perfectly that, at any time, I was able to procure inbred rats of the desired age.

Gardner Cheney Basset.

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I. INTRODUCTION.

A few years ago experimental inbreeding of the albino rat, *Mus norvegicus albinus*, was started at the Wistar Institute of Anatomy and Biology in order to determine the anatomical consequences of such procedure upon successive generations of progeny. Among other results obtained was a distinct and progressive decrease in actual and relative brain weight (relative, that is, in reference to body length) for four generations of close inbreeding. From the fourth to the tenth generations the relative brain weight remained, on the average, constant at six and one half percent less than that of the average normal rat.

When, early in October, 1911, Dr. Donaldson suggested to Professor Watson that the deterioration in brain weight might be accompanied by a similar deterioration in the ability to form habits a new line of investigation in comparative psychology was opened up. The problem was offered to the writer and gladly accepted.

In regard to the question as to whether inbreeding, per se, has deteriorating effects upon progeny it is unsafe to be arbitrary, and authoritative testimony must await the results of further investigations. We know, upon the authority of historians, that the Incas of Peru for many generations married their oldest sisters and were, until their extinction by the Spaniards, physically and mentally superior to their subjects. Breeders of domestic animals frequently resort to inbreeding in order to perfect desirable qualities in the strain. It may be, as many claim, that inbreeding is deteriorating only in cases where an hereditary taint, appearing in the com-

mon ancestor, is strengthened in the progeny of a consanguineous union. Of the rats used in the experiments hereinafter described it is not postulated that the lesser ability to form habits is necessarily due to inbreeding; but the rats used for purposes of inbreeding produced a strain having a lesser relative brain weight, which rats, for convenience, I shall hereafter refer to as the Inbred strain. The object, then, of the following experiments is to compare the habit-forming ability of the inbred strain with lesser brain weights with the ability of a normal control series.

Owing to the fact that experimental work on the brain weight problem has not before been attempted there is no history and little literature to be presented. Donaldson¹ reproduces tables from Manouvrier² showing the brain weights of eminent men to be, on the average, greater than those of average Parisians. It is not necessarily true that the specific individual with greater brain weight is more intelligent or will contribute more to the world's arts and sciences than the specific individual of lesser brain weight. but, if the tables of Manouvrier are to be believed, individuals of greater brain weight are more likely to be more intelligent and to do the world greater service.

¹Donaldson, The Growth of the Brain, London and New York, 1909, pp. 128 ff.

²Manouvrier, Sur l'interpretation de la quantité dans l'Encéphale, &c., Paris, 1885.

The results of the experiments hereinafter described agree closely with Manouvrier's tables. Tables of distribution of brain weights of the inbred strain and normal con-

trol series overlap; but the normal series, having a greater brain weight average, show greater ability in habit formation.

All the experiments here described were carried out at the Psychological Laboratory of the Johns Hopkins University.

II. METHODS.

All the inbred rats used in this investigation were bred at the Wistar Institute by Dr. Helen D. King. Two strains were used, referred to in this paper as strains A and B. The original parents of each strain were picked at random, a male and female from each of two unrelated litters. The A male was mated to his sister, A female, and the B male to his sister. Their respective litters constituted generation 1A and 1B. From this point inbreeding was carried on by selecting from the litter the healthiest appearing rats and mating brother to sister within the same litter, this constituting the closest possible inbreeding. At about thirty days of age the young rats were taken from their mother and those to be used by the writer were shipped to the Johns Hopkins University. There were no fatalities en route, and all arrived apparently in good condition. The system of numbering individual rats as appears in the tables is as follows: the first number refers to the generation of inbreeding, the letter to the strain (A or B) and the last number identifies the individual. For example 7A90♀ is analyzed as follows: 7th generation inbred, A strain, individual 90, female.

It seemed advisable to secure normal control mating strains from different laboratories in order to avoid any possibility of inbreeding. Control strain H is from the Johns Hopkins Laboratory, W from the stock rats of the Wistar Institute, C from Columbia University, B a litter bought from a Baltimore dealer, and E a large male given to me by Dr. Herbert E. Evans of the Johns Hopkins Medical School. Care was taken in mating the control series to avoid any approach to

inbreeding. As in the case of inbred rats the young were taken from the mother at the age of thirty days. The system of numbering individual normal rats as appears in the tables is as follows: the first letter, S, signifies that it is a standard or normal control rat, the letters within the parenthesis give the pedigree and the figures give the individual number. For example, S(C/EE)70♂ is analyzed as follows: standard or normal control series, C father, E maternal grandfather, B maternal grandmother, individual 70, male.

When taken from the mother the males were kept in cages separate from the females. In order to keep conditions constant neither males nor females were allowed to mate. As solitude may affect behavior, from three to five rats were kept in each cage. The cages were sufficiently large (24"x15" x15") to permit this. Cages were frequently disinfected with a preparation, Creso Dip, the principal ingredient of which is carbolic acid. A layer of clean chips and shavings was kept on the floor. The food, from date of weaning, consisted of bread soaked in milk (no water), and, twice a week, grain and sunflower seeds. Temperature was kept as uniformly as possible at 70°F. In order to facilitate this a small gas heater was installed and it proved very efficient during the coldest days of winter. As the animal laboratory is located in the basement the temperature, during the summer, rarely rose above our norm.

At the age of sixty days the rats intended for experimental purposes were placed on a short allowance of feeding time (thirty minutes) in order to prepare them for experimentation. The experiments were begun uniformly at the age of seventy days. Care was taken in each experiment to use the same number of males and females in the control series as in the inbred; this was necessary because, as in man, the relat-

ive brain weight of the female is greater than that of the male. Experiments upon individual rats were conducted as nearly as possible at the same time of day, thus forming feeding rhythms.

There are three methods of estimating perfection in experiments relating to the behavior of animals: the number of errors, the distance traversed and the time required. In any case it is hard to form a judgment as to what constitutes an error and especially so in a comparative study of this kind where it is possible for the personal prejudice of the experimenter to enter. At the time this investigation was begun there was no adequate means for measuring the distance traversed. This left the time consumed as the only criterion of perfection. However, time is the criterion used by most investigators in the animal field. Hicks¹, in summing up the experimental results of several investigators concludes, that "time is the best single criterion, inasmuch as it represents all phases of the process of learning, and since it will yield the most comparable results at the hands of different investigators." In timing the rats a very accurate Swiss split-second stop-watch was used. Under ideal conditions, perhaps, the animal should be presented to the problem by one person, timed by another, while the experimenter himself should merely record results. But timing very soon becomes automatic; when the rat is crossing the starting line it is almost impossible to inhibit the impulse to press the button.

¹Hicks, The Relative Values of the Different Curves of Learning, Jl. of An. Beh., vol. I, pp. 138 ff.

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used were shipped to the Wistar Institute, where Dr. Shinkishi Hatai ascertained the body length and weight, brain and cord weight, and the percentage of water in brain and cord. From the figures supplied by him I was enabled to draw up the anatomical data and to formulate the relations between relative brain weight and habit formation.

III. EXPERIMENT 1: THE MAZE.

The apparatus used in this experiment was the Watson Maze (Plate I). This maze is circular in form, five feet in diameter, with entrances from outer runways to the next inner at alternate ends of a quadrant arc. The partitions are of aluminum and rise to a height of five inches above the floor of the maze. A heavy wire screen resting on top serves the purpose of preventing the rats from climbing over the partitions, and also allows the experimenter to observe all movements within. The perfect course of the animal running is, from the entrance, E, through runway entrances 1, 2, 3, 4, 5, 6 and 7 to F (food). Each side of runway entrances 2 to 6 inclusive lead into cul-de-sacs.

The object of the experiment was to have each rat learn to reach the centre, F, in the least possible time, the starting time being taken when the animal crossed runway entrance 1, and the finishing time when he crossed entrance 7.

In preparation, each animal, beginning at the age of sixty-five days, was fed alone in the centre, F, for ten minutes daily for five consecutive days. During this period the centre was barred from the rest of the maze at entrance 6. At the age of seventy days the experiment began. Eleven males and ten females from the inbred strain were used and, as control, an equal number of males and females from the normal series. Of the inbred rats, fourteen were from the 6th generation and seven from the 7th. The stimulus used was the food to which they had become accustomed, bread soaked in milk.

Each rat was required to run from E to F five times each day. At the end of the fifth trial it was allowed to feed

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in F for five minutes, but permitted no more food until the completion of the next day's experiment. Each rat was used daily until it had learned the course perfectly, the criterion of perfection being five perfect trials for each of three successive days. A perfect trial consisted in running the course within six seconds, a period so short that it was practically impossible for the rat to make a detectable error and reach the centre within that time. Those rats failing to learn within one hundred days (500 trials) were no longer used for experimentation. Those rats learning the maze were, at the conclusion of the experiment, fed for sixty days in a runway twenty-five feet long with a feeding box at the far end. At the end of this period they were tested for retention and relearning.

The results of the experiment for the inbred rats are given in tables Ia, Ib, and Ic; for the normal control series in tables IIa, IIb, and IIc. These tables give only the averages of the five daily trials of individual rats. The shortest period of learning for an inbred rat was twelve days; for a normal control, ten days. Two inbred rats and one normal failed to learn the maze at all. This paper does not pretend to take up individual differences, but certain of the normal control series showed peculiarities of behavior similar to those of the inbred series. These peculiarities, for the most part, consisted in disorientation and persistent errors. Strain B of the control series exhibited these peculiarities to such an extent and were so slow in learning (the control rat failing to learn at all was from this strain) that the investigator suspected this strain to be of lesser relative brain weight; and, when the returns were received from the Wistar Institute, this was indeed found to be the case.

Tables Ia and IIa show, respectively, the daily average time in seconds of the inbred and normal control series during the process of formation of the maze habit. After the standard set for perfection (five perfect trials of six seconds or less each, for each of three consecutive days) had been reached, the average time of the three perfect days was carried on for the succeeding days in red ink. For example, in Table Ia, the time record of rat 6B103♂ is recorded thus: day 10, 5.12 seconds; day 11, 4.92 seconds; day 12, 5.04 seconds. The average of these three perfect days, 5.03 seconds, is carried forward in red ink. It is necessary to preserve these figures in order to compute the total daily averages based upon which the curves of learning are constructed.

Table IIb, the daily averages of the control series, is especially significant showing, as it does, the erratic behavior of the B strain. By the end of the twenty-fourth day all the normal group had formed the perfect maze habit with the exception of five rats from the B strain; nor did any of these five become perfect until a week later when two dropped out. One B rat persisted in the same error, passing entrance 2 into the cul-de-sac at the right, with occasional other errors and did not learn the problem in the hundred days allowed.

Tables Ib and IIb show what I have termed the absolute retention of, respectively, the inbred and normal control series. Absolute retention is measured by the time required to complete the first trial of the relearning series after the sixty days' rest; the stronger the retention, the less the time. These tables show the absolute retention of the normal control series to be much stronger than that of the inbred.

Tables Ic and IIc show, respectively, the daily av-

erage time in seconds of the inbred and normal control series during the process of relearning. The two inbred and one control rat failing to learn the maze were not, of course, tested for relearning. Of those inbreds so tested, two had failed to relearn within fifty days, in consequence of which it was thought useless to carry them further. All the control series had relearned at the end of twenty-two days.

Tables Id and IId show, respectively, the anatomical data of the inbred and normal control rats used in the maze experiments, based upon figures sent by the Wistar Institute. These tables will be treated fully in the comparative summaries.

For greater convenience in making a comparative study I have placed together in Table III a summary consisting of the daily averages of all the inbred and all the control rats. From this table, too, are constructed the comparative curves of learning. The table shows that two of the inbred and one of the normal rats failed to learn the maze habit. The inbreds required, on the average, 36.62+days to learn; the normals but 24.67+. The absolute retention of the inbreds was, on the average, 81.558 seconds; of the normals, 59.640 seconds. Two of the inbreds failed to relearn; all the normals had relearned at the end of twenty-two days. The inbreds required, on the average, 12.68+ days to relearn; the normals but 5.75.

In all these criteria of ability the rats of the normal control series are shown, on the average, to be superior to those of the inbred series.

There are two possible criteria for estimating the relative brain weight -- in reference to body length and in reference to body weight. In a healthy normal rat the differ-

ence between body weight in grams and body length in millimetres is slight. But under conditions of overfeeding or of sickness the body weight varies greatly while the body length remains constant. For this reason Dr. Donaldson has accepted body length as the sole criterion. In these tables, however, both are produced. Both body length and body weight of the inbred rats used in the maze are, on the average, a trifle greater than is the case with the normals. The average actual brain weight of the inbreds is less than that of the normals. The relative brain weight (in reference to body length) of the inbreds is 4.43% less than that of the normals. The relative brain weight (in reference to body weight) of the inbreds is 7.99% less than that of the normals. The percentage of water in brain and cord decreases with age, but in the inbreds of the maze series, although killed on the average fourteen days later than the normals, the percentage of water was greater.

The tables of comparative summaries of maze results support the hypothesis that the deterioration of brain weight in a strain of rats is accompanied by deterioration in the ability to form habits.

In Plate II is shown the curve of learning (below) and of relearning (above) of the inbred rats compared with those of the normal control. The inbred curve is shown by the solid line, that of the control by the broken line. The ordinates give the average time in seconds, and the abscissae the number of the day in which such time was made. The time required by both inbreds and normals for the first four days was so long that it is represented here by figures rather than by the curve. For the first few days the descent in both cases is very rapid, and from the twentieth day the normal curve

lies entirely below the six second mark. The inbred curve never reaches a flattened appearance but shows great irregularities, particularly on the forty-fifth, sixty-first, eighty-second, ninetieth and ninety-second days. The inbred curve of relearning is more similar to that of the control, but it must be borne in mind that the two inbreds and one normal failing to learn are not represented here. From the twenty-second day the normal control curve is perfectly flat at 5.3 seconds, all the animals having relearned. Two of the inbreds failing to relearn, their curve of relearning remains slightly irregular and above that of the normals.

In Plate III may be seen the distribution curves of learning and relearning of both the inbred and control series for the maze experiment. The time is given in days -- in groups of five for learning, in groups of two for relearning. As may readily be seen, the advantage from the standpoint of time (days required to learn and relearn) lies wholly in favor of the normal control series.

The question arises as to whether the later generations of inbred rats differ from the earlier in the ability to form habits; that is, is deterioration in this ability progressive, even if, as earlier stated, deterioration in relative brain weight after the 4th generation is not. Of the inbred rats used in the maze, fourteen were from the 6th generation and seven from the 7th generation. In Table IV is shown a comparative summary consisting of the daily averages of all the 6th and all the 7th generations. From this table, too, are constructed the curves of learning of the 6th and 7th generation inbreds. The table shows that two of the 7th generation failed to learn the maze; all the 6th generation had learned it at the end of eighty-three days. The 6th generation re-

quired, on the average, 32.93 days to learn; the 7th generation, 44.00+. The absolute retention of the 6th generation was, on the average, 65.443 seconds; of the 7th generation, 126.680 seconds. Two of the 6th generation failed to relearn; all the 7th generation had relearned at the end of fourteen days. The 6th generation required, on the average, 14.14+ days to relearn; the 7th generation but 8.60.

In these criteria of ability, the 6th generation excelled in learning and absolute retention; the 7th in relearning. It must be remembered, however, that two rats of the 7th generation, having failed to learn, were not tested for relearning. On the whole, the ability of the 7th generation inbreds in learning the maze appears to be somewhat inferior to that of the 6th.

The body length and body weight of the 6th generation average greater than those of the 7th. The average actual brain weight of the 6th generation is greater than that of the 7th. The relative brain weight (in reference to body length) of the 6th generation is .91% less than that of the 7th generation. The relative brain weight (in reference to body weight) of the 6th generation is 1.50% less than that of the 7th generation. The relative brain weight of the inbred rats used in the maze has not deteriorated from one generation to another; however, the number of rats considered in each generation is but few, and all from the 7th generation are females having greater relative brain weights than males. The percentage of water in brain and cord is within .03% of the same figure in the two generations.

In Plate IV is shown the curve of learning (below) and of relearning (above) of the 6th and 7th generations of inbred rats. The 6th generation curve is shown by the broken

line; that of the 7th generation by the solid line. The ordinates give the time in seconds, and the abscissae the number of the day in which such time was made. From the twenty-second day in the curve of learning the 6th generation curve is below the second mark, and from the eighty-third day is flat at 5.158 seconds. The 7th generation learning curve is very irregular throughout its length and never approaches the appearance of learning. The 7th generation relearning curve, however, is slightly better than the 6th, being flat from the 14th day at 5.656 seconds; but the two rats that failed to learn are not represented in this curve.

The similarity in behavior of the rats of the control series containing B blood to that of the inbreds has already been mentioned. Table V presents a summary consisting of the daily averages of the nine control rats containing B blood and the twelve control rats lacking it. Eight of the rats containing B are $1/2$ C and $1/2$ B; the other is $1/2$ C, $1/4$ F and $1/4$ B. Most of the rats lacking B blood contain C, which makes void the possibility that C is a factor in the lack of ability in the strain containing B. In order to compare the behavior of control rats having B and those lacking it with the inbreds, cross references may be made from Table V to the inbred averages of Table III. The control rats having B blood shall be referred to as B rats; those lacking B blood as (-B) normals.

The tables show that two of the inbreds and one of the B failed to learn the maze; the (-B) normals had all learned at the end of the twenty-fifth day. The inbreds required, on the average, 36.62+ days to learn; the B 35.67+; and the (-B) but 16.42. The absolute retention of the inbreds was, on the average, 81.558 seconds; of the B, 72.475 seconds; and

of the (-B), but 51.083 seconds. Two of the inbreds failed to relearn; all the B had relearned at the end of the twenty-second day; while all the (-B) had relearned at the end of the eighth day. The inbreds required, on the average, 12.68 days to relearn; the B, 8.24 days; the (-B), but 4.08 days.

In these criteria of ability the inbreds did the least well; the B rats were, in each instance, not far from their record; the (-B) were much superior to either.

Both body length and body weight were greatest in the inbreds, next in the B, and least in the (-B). Actual brain weight was least in the inbreds, much greater in the B, and slightly greater in the (-B) than in the B. The relative brain weight (in reference to body length) of the inbreds was 5.46% less than that of the (-B); that of the B was 2.53% less than that of the (-B). The relative brain weight (in reference to body weight) of the inbreds was 10.02% less than that of the (-B); that of the B was 5.15% less than that of the (-B). As might be expected from the behavior and the hypothesis, the average relative brain weight of the B strain lies between that of the inbreds and of the (-B).

The results here obtained reinforce the former conclusion that deterioration of brain weight in a strain of rats is accompanied to a similar degree by deterioration in the ability to form habits.

In Plate V is shown the curve of learning (below) and of relearning (above) of the inbred and B rats compared with those of the (-B). The inbred curve is represented by the solid line, the B by the heavy broken, and the (-B) by the lighter broken line. The ordinates give the average time in seconds, and the abscissae the number of the day in which such time was made. From the twentieth day the (-B) curve is

flat at 4.9 seconds. Neither the inbred nor the B curves flatten entirely, although the B curve is more regular than that of the inbreds. The curve of relearning (without the two inbreds and one B that failed to learn) of all three nearly coincides. But here the inbred remains slightly above, and the (-B) slightly below the curve of the B.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---------|---------|--------|--------|--------|--------|
| 6A71♂ | 287.60 | 33.60 | 13.96 | 11.84 | 9.12 |
| 6A72♂ | 570.20 | 19.52 | 15.72 | 11.52 | 7.60 |
| 6A73♂ | 524.12 | 34.92 | 15.32 | 12.52 | 10.28 |
| 6B70♂ | 853.16 | 86.08 | 90.68 | 66.68 | 58.32 |
| 6B71♂ | 940.96 | 120.76 | 81.56 | 32.80 | 30.44 |
| 6B72♂ | 553.84 | 97.48 | 65.36 | 41.12 | 31.76 |
| 6B73♂ | 217.40 | 53.12 | 72.96 | 67.12 | 35.72 |
| 6B101♂ | 375.24 | 105.04 | 105.56 | 83.40 | 64.76 |
| 6B102♂ | 453.16 | 158.92 | 464.44 | 55.20 | 91.12 |
| 6B103♂ | 173.24 | 57.24 | 52.72 | 45.84 | 14.00 |
| 6B104♂ | 661.60 | 43.76 | 14.72 | 7.32 | 11.40 |
| 6B76♀ | 1556.44 | 77.20 | 48.40 | 39.28 | 32.36 |
| 6B77♀ | 280.60 | 118.20 | 58.40 | 31.00 | 16.16 |
| 6B108♀ | 132.36 | 20.96 | 20.16 | 18.64 | 7.16 |
| 7A25♀ | 451.04 | 151.24 | 31.68 | 20.40 | 14.04 |
| 7A26♀ | 761.84 | 260.76 | 127.36 | 73.04 | 27.36 |
| 7A55♀ | 151.64 | 29.80 | 24.56 | 90.56 | 18.80 |
| 7A56♀ | 1451.24 | 369.20 | 92.00 | 97.48 | 38.28 |
| 7A57♀ | 467.56 | 15.56 | 10.52 | 9.28 | 8.20 |
| 7A89♀ | 155.96 | 45.44 | 8.56 | 5.92 | 4.68 |
| 7A90♀ | 145.76 | 20.68 | 16.72 | 7.68 | 5.36 |
| Average | 531.665 | 91.404 | 68.160 | 39.459 | 25.568 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|---------|--------|--------|--------|-------|--------|
| 6A71♂ | 7.76 | 11.84 | 8.32 | 8.80 | 7.44 |
| 6A72♂ | 10.88 | 11.96 | 10.28 | 8.92 | 6.92 |
| 6A73♂ | 23.44 | 13.72 | 10.72 | 12.00 | 10.84 |
| 6B70♂ | 26.88 | 12.72 | 9.32 | 6.40 | 6.96 |
| 6B71♂ | 15.04 | 15.20 | 8.24 | 6.88 | 10.28 |
| 6B72♂ | 14.60 | 13.36 | 9.44 | 8.92 | 6.52 |
| 6B73♂ | 21.04 | 18.44 | 11.92 | 10.44 | 10.20 |
| 6B101♂ | 105.44 | 54.48 | 17.12 | 17.08 | 11.56 |
| 6B102♂ | 32.64 | 27.48 | 18.92 | 14.92 | 13.28 |
| 6B103♂ | 8.76 | 7.96 | 6.76 | 6.76 | 5.12 |
| 6B104♂ | 7.64 | 4.84 | 8.16 | 4.68 | 4.56 |
| 6B76♀ | 17.92 | 14.16 | 14.44 | 17.60 | 19.32 |
| 6B77♀ | 10.80 | 9.32 | 8.56 | 7.84 | 16.64 |
| 6B106♀ | 39.36 | 13.72 | 6.84 | 15.56 | 7.40 |
| 7A25♀ | 8.84 | 7.84 | 7.64 | 8.64 | 7.04 |
| 7A26♀ | 20.40 | 14.04 | 15.04 | 9.24 | 8.04 |
| 7A55♀ | 8.56 | 7.52 | 6.52 | 5.36 | 5.88 |
| 7A56♀ | 20.00 | 17.84 | 15.00 | 15.52 | 19.68 |
| 7A57♀ | 5.80 | 5.12 | 6.12 | 5.40 | 5.76 |
| 7A89♀ | 5.36 | 5.04 | 16.60 | 4.48 | 10.12 |
| 7A90♀ | 8.96 | 5.28 | 16.32 | 8.44 | 6.40 |
| Average | 20.015 | 13.899 | 11.061 | 9.709 | 9.522 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 8.36 | 8.92 | 6.88 | 6.76 | 6.80 |
| 6A72♂ | 7.12 | 8.32 | 7.32 | 7.56 | 7.48 |
| 6A73♂ | 8.72 | 8.76 | 9.60 | 9.60 | 8.76 |
| 6B70♂ | 7.52 | 7.04 | 5.04 | 6.72 | 5.76 |
| 6B71♂ | 5.76 | 5.36 | 5.24 | 7.92 | 6.80 |
| 6B72♂ | 7.28 | 6.64 | 8.00 | 6.52 | 6.44 |
| 6B73♂ | 11.80 | 8.32 | 7.96 | 9.76 | 7.48 |
| 6B101♂ | 13.28 | 16.56 | 14.44 | 10.24 | 12.32 |
| 6B102♂ | 12.00 | 8.92 | 7.96 | 7.32 | 6.28 |
| 6B103♂ | 4.92 | 5.04 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 9.72 | 5.08 | 6.32 | 5.00 | 4.76 |
| 6B76♀ | 44.60 | 10.20 | 12.16 | 15.40 | 11.08 |
| 6B77♀ | 8.32 | 12.12 | 36.68 | 8.68 | 6.04 |
| 6B108♀ | 6.60 | 4.84 | 4.92 | 4.60 | 4.79 |
| 7A25♀ | 7.80 | 6.20 | 6.88 | 6.92 | 6.36 |
| 7A26♀ | 13.76 | 7.96 | 8.56 | 9.72 | 7.96 |
| 7A55♀ | 5.88 | 4.80 | 4.76 | 4.68 | 4.75 |
| 7A56♀ | 12.92 | 13.20 | 9.08 | 7.44 | 12.08 |
| 7A57♀ | 8.12 | 6.52 | 5.88 | 6.36 | 4.84 |
| 7A59♀ | 5.16 | 6.60 | 7.00 | 5.04 | 4.80 |
| 7A90♀ | 4.92 | 5.28 | 5.16 | 8.32 | 6.40 |
| Average | 10.217 | 7.937 | 8.708 | 7.600 | 7.000 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 6.64 | 6.04 | 5.52 | 6.56 | 6.48 |
| 6A72♂ | 7.08 | 6.04 | 6.16 | 6.04 | 5.52 |
| 6A73♂ | 7.96 | 7.00 | 7.68 | 7.88 | 9.20 |
| 6B70♂ | 5.44 | 6.08 | 5.88 | 6.92 | 7.00 |
| 6B71♂ | 5.24 | 4.92 | 4.88 | 5.92 | 8.44 |
| 6B72♂ | 8.84 | 5.48 | 10.32 | 7.96 | 5.40 |
| 6B73♂ | 5.84 | 7.48 | 5.64 | 5.60 | 6.08 |
| 6B101♂ | 10.12 | 8.88 | 9.96 | 7.56 | 7.60 |
| 6B102♂ | 6.28 | 6.88 | 6.00 | 6.48 | 5.76 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 5.00 | 4.52 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 10.28 | 10.96 | 6.32 | 7.40 | 6.32 |
| 6B77♀ | 6.20 | 9.56 | 5.96 | 6.36 | 7.52 |
| 6B106♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.96 | 6.96 | 5.92 | 7.96 | 7.48 |
| 7A26♀ | 6.88 | 9.52 | 8.56 | 9.08 | 12.88 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 7.84 | 8.20 | 7.68 | 9.36 | 6.16 |
| 7A57♀ | 4.64 | 4.68 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.68 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 5.72 | 5.68 | 7.04 | 6.36 | 4.88 |
| Average | 6.439 | 6.585 | 6.305 | 6.492 | 6.458 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 7.44 | 8.28 | 6.52 | 6.76 | 8.84 |
| 6A72♂ | 6.24 | 7.04 | 5.12 | 6.88 | 6.04 |
| 6A73♂ | 8.72 | 6.68 | 9.00 | 6.80 | 6.96 |
| 6B70♂ | 5.28 | 5.08 | 4.56 | 4.97 | 4.97 |
| 6B71♂ | 6.00 | 5.24 | 5.72 | 5.88 | 4.92 |
| 6B72♂ | 7.56 | 5.12 | 5.52 | 4.96 | 5.48 |
| 6B73♂ | 5.08 | 4.80 | 5.72 | 4.72 | 5.36 |
| 6B101♂ | 9.20 | 6.16 | 9.44 | 6.72 | 8.44 |
| 6B102♂ | 7.52 | 6.56 | 6.32 | 5.68 | 6.12 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.24 | 5.44 | 5.12 | 5.00 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 4.96 | 5.12 | 7.16 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 9.96 | 5.68 | 6.20 | 6.20 | 5.64 |
| 7A26♀ | 7.84 | 6.60 | 8.88 | 10.16 | 8.96 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 8.64 | 8.88 | 8.64 | 7.16 | 13.32 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 5.00 | 4.88 | 4.92 | 4.92 | 4.92 |
| Average | 6.362 | 5.749 | 5.978 | 5.753 | 6.248 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 7.96 | 8.04 | 5.88 | 6.52 | 5.60 |
| 6A72♂ | 6.12 | 6.76 | 5.20 | 6.16 | 5.28 |
| 6A73♂ | 6.80 | 7.00 | 6.36 | 6.40 | 6.96 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.88 | 4.92 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 4.88 | 5.32 | 5.20 | 5.16 | 4.96 |
| 6B73♂ | 5.36 | 4.88 | 4.80 | 5.52 | 5.32 |
| 6B101♂ | 6.48 | 7.92 | 6.64 | 6.64 | 7.64 |
| 6B102♂ | 6.16 | 5.56 | 5.60 | 5.12 | 6.12 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.08 | 4.88 | 5.04 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.88 | 6.88 | 6.52 | 9.40 | 6.28 |
| 7A26♀ | 7.64 | 7.72 | 6.52 | 11.00 | 7.22 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 9.20 | 35.88 | 10.40 | 18.32 | 9.88 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.734 | 7.130 | 5.669 | 6.387 | 5.697 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 6.04 | 6.32 | 7.04 | 6.44 | 5.28 |
| 6A72♂ | 6.04 | 6.40 | 6.20 | 5.92 | 6.68 |
| 6A73♂ | 6.76 | 9.36 | 7.24 | 9.60 | 6.36 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.76 | 4.60 | 4.68 | 4.68 |
| 6B101♂ | 5.84 | 7.48 | 8.08 | 7.44 | 8.36 |
| 6B102♂ | 5.36 | 5.36 | 5.40 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B106♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 6.08 | 6.32 | 6.04 | 12.12 | 5.52 |
| 7A26♀ | 6.00 | 6.92 | 6.48 | 7.52 | 6.40 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 7.28 | 7.96 | 9.68 | 9.68 | 12.72 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.384 | 5.708 | 5.702 | 6.084 | 5.731 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.48 | 5.48 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 7.04 | 6.56 | 5.84 | 5.68 | 5.76 |
| 6A73♂ | 6.64 | 7.48 | 6.60 | 6.24 | 5.88 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 6.72 | 6.88 | 6.32 | 7.28 | 6.44 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 6.12 | 5.32 | 5.64 | 5.36 | 5.44 |
| 7A26♀ | 8.36 | 6.28 | 6.64 | 7.00 | 14.92 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 8.00 | 7.96 | 9.88 | 10.32 | 9.82 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.590 | 5.476 | 5.494 | 5.540 | 5.848 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 7.24 | 8.28 | 6.68 | 6.52 | 7.08 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 7.36 | 12.68 | 7.88 | 6.16 | 8.40 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 10.00 | 8.52 | 7.92 | 9.04 | 172.12 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 8.20 | 10.40 | 10.12 | 8.68 | 9.32 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.640 | 5.978 | 5.631 | 5.526 | 13.456 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 7.84 | 6.96 | 7.76 | 7.68 | 7.08 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 6.28 | 5.68 | 6.32 | 6.88 | 7.36 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 32.80 | 9.64 | 11.72 | 11.80 | 9.96 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 8.84 | 47.48 | 27.20 | 7.96 | 12.60 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 6.734 | 7.400 | 6.602 | 5.713 | 5.840 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 6.40 | 8.60 | 6.64 | 5.88 | 11.40 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 12.60 | 6.68 | 5.60 | 6.56 | 6.68 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 8.08 | 7.12 | 7.64 | 7.44 | 7.36 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 10.00 | 7.92 | 6.88 | 8.20 | 8.76 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.844 | 5.522 | 5.353 | 5.416 | 5.707 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|---------|--------|--------|--------|--------|--------|
| 5A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 7.44 | 7.00 | 6.24 | 6.48 | 7.04 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 6.28 | 7.04 | 7.00 | 5.48 | 5.36 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 6.88 | 9.52 | 7.40 | 7.20 | 8.76 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 18.16 | 9.24 | 8.32 | 13.24 | 34.72 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.924 | 5.640 | 5.458 | 5.621 | 6.740 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 8.12 | 8.68 | 7.92 | 6.32 | 6.48 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.56 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 7.36 | 12.24 | 8.60 | 7.48 | 7.24 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 68.60 | 23.24 | 22.08 | 9.00 | 14.56 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 8.347 | 6.442 | 6.177 | 5.425 | 5.686 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 6.32 | 7.24 | 6.16 | 7.56 | 5.88 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 8.60 | 8.04 | 8.32 | 8.88 | 8.48 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 17.44 | 11.84 | 8.68 | 14.68 | 7.84 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.880 | 5.630 | 5.442 | 5.821 | 5.396 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 5.76 | 6.12 | 6.24 | 5.76 | 6.52 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 8.04 | 7.32 | 8.64 | 9.04 | 11.04 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 8.88 | 15.92 | 8.60 | 11.40 | 15.80 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.419 | 5.737 | 5.457 | 5.587 | 5.928 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 7.04 | 6.20 | 6.48 | 7.32 | 5.92 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 11.16 | 8.56 | 9.76 | 7.60 | 7.48 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 10.08 | 15.88 | 14.80 | 12.12 | 9.56 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.686 | 5.798 | 5.817 | 5.627 | 5.432 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 5.72 | 5.64 | 5.76 | 5.76 | 5.76 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 7.44 | 41.80 | 7.36 | 8.80 | 27.88 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 23.72 | 15.48 | 8.72 | 10.56 | 8.56 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 6.095 | 7.335 | 5.379 | 5.535 | 6.345 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 11.08 | 7.76 | 12.44 | 9.88 | 41.20 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 7.44 | 7.00 | 7.44 | 7.08 | 15.00 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.495 | 5.316 | 5.560 | 5.421 | 7.290 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6B101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6B102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6B103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6B104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6B76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6B77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6B108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 17.76 | 36.88 | 24.08 | 20.20 | 12.68 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 7.76 | 13.56 | 9.32 | 9.16 | 7.12 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.829 | 7.015 | 6.204 | 6.011 | 5.556 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|---------|--------|--------|--------|--------|---------|
| 6A71♂ | 5.41 | 5.41 | 5.41 | 5.41 | 5.41 |
| 6A72♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6A73♂ | 5.76 | 5.76 | 5.76 | 5.76 | 5.76 |
| 6B70♂ | 4.97 | 4.97 | 4.97 | 4.97 | 4.97 |
| 6B71♂ | 4.91 | 4.91 | 4.91 | 4.91 | 4.91 |
| 6B72♂ | 5.11 | 5.11 | 5.11 | 5.11 | 5.11 |
| 6B73♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| 6E101♂ | 5.47 | 5.47 | 5.47 | 5.47 | 5.47 |
| 6E102♂ | 5.37 | 5.37 | 5.37 | 5.37 | 5.37 |
| 6E103♂ | 5.03 | 5.03 | 5.03 | 5.03 | 5.03 |
| 6E104♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| 6E76♀ | 5.19 | 5.19 | 5.19 | 5.19 | 5.19 |
| 6E77♀ | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| 6E108♀ | 4.79 | 4.79 | 4.79 | 4.79 | 4.79 |
| 7A25♀ | 5.44 | 5.44 | 5.44 | 5.44 | 5.44 |
| 7A26♀ | 19.80 | 16.24 | 23.20 | 22.48 | 21.92 |
| 7A55♀ | 4.75 | 4.75 | 4.75 | 4.75 | 4.75 |
| 7A56♀ | 7.08 | 5.84 | 6.28 | 6.08 | 6.32 |
| 7A57♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| 7A89♀ | 4.84 | 4.84 | 4.84 | 4.84 | 4.64 |
| 7A90♀ | 4.92 | 4.92 | 4.92 | 4.92 | 4.92 |
| Average | 5.893 | 5.893 | 5.893 | 5.893 | 5.893 |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | Failed to learn. | Days required to learn. |
|--------|---------------------|----------------------------|
| 6A71♂ | | 37 |
| 6A72♂ | | 40 |
| 6A73♂ | | 82 |
| 6B70♂ | | 23 |
| 6B71♂ | | 27 |
| 6B72♂ | | 30 |
| 6B73♂ | | 33 |
| 6B101♂ | | 61 |
| 6B102♂ | | 33 |
| 6B103♂ | | 12 |
| 6B104♂ | | 17 |
| 6B76♀ | | 24 |
| 6B77♀ | | 28 |
| 6B108♀ | | 14 |
| 7A25♀ | | 39 |
| 7A26♀ | 1 | 100+ |
| 7A55♀ | | 14 |
| 7A56♀ | 1 | 100+ |
| 7A57♀ | | 17 |
| 7A89♀ | | 16 |
| 7A90♀ | | 22 |
| Total | 2 | :Average 36.62+ |

Table Ia. Maze Learning by Inbred Rats.

| Rat # | First trial after 60 days' rest. |
|---------|-------------------------------------|
| ----- | |
| 6A71♂ | 20.20 |
| 6A72♂ | 77.00 |
| 6A73♂ | 13.00 |
| 6B70♂ | 38.20 |
| 6B71♂ | 86.00 |
| 6B72♂ | 36.40 |
| 6B73♂ | 19.20 |
| 6B101♂ | 164.60 |
| 6B102♂ | 41.60 |
| 6B103♂ | 109.20 |
| 6B104♂ | 84.60 |
| 6B76♀ | 68.80 |
| 6B77♀ | 36.60 |
| 6B108♀ | 120.80 |
| 7A25♀ | 383.60 |
| 7A26♀ | ----- |
| 7A55♀ | 89.20 |
| 7A56♀ | ----- |
| 7A57♀ | 21.40 |
| 7A89♀ | 51.60 |
| 7A90♀ | 87.60 |
| ----- | |
| Average | 81.558 |
| ----- | |

Table Ib. Absolute Retention of Inbred Rats.

Maze.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---------|--------|--------|--------|-------|-------|
| 6A71♂ | 20.16 | 7.72 | 9.00 | 8.44 | 6.88 |
| 6A72♂ | 20.64 | 6.48 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 7.80 | 9.24 | 6.32 | 8.56 | 8.48 |
| 6B70♂ | 22.20 | 12.76 | 17.92 | 13.32 | 10.36 |
| 6B71♂ | 34.32 | 10.24 | 7.40 | 8.84 | 6.08 |
| 6B72♂ | 13.12 | 5.72 | 6.00 | 4.88 | 4.88 |
| 6B73♂ | 9.20 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 52.68 | 10.12 | 23.96 | 14.40 | 21.52 |
| 6B102♂ | 38.80 | 9.80 | 12.12 | 17.80 | 11.96 |
| 6B103♂ | 118.08 | 23.32 | 20.32 | 8.12 | 9.72 |
| 6B104♂ | 25.76 | 5.60 | 6.00 | 5.72 | 5.52 |
| 6B76♀ | 29.12 | 19.12 | 11.52 | 5.12 | 5.12 |
| 6B77♀ | 15.20 | 11.36 | 5.84 | 10.24 | 6.56 |
| 6B108♀ | 39.04 | 8.56 | 17.68 | 10.16 | 6.40 |
| 7A25♀ | 69.40 | 8.04 | 7.32 | 8.40 | 13.96 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 42.20 | 50.36 | 8.04 | 14.60 | 5.80 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 11.40 | 8.48 | 9.68 | 21.28 | 9.32 |
| 7A89♀ | 32.44 | 10.24 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 51.32 | 9.84 | 6.28 | 5.84 | 5.84 |
| Average | 35.415 | 12.208 | 10.069 | 9.560 | 8.069 |

Table 1c. Maze Relearning by Inbred Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|---------|-------|-------|-------|-------|--------|
| 6A71♂ | 6.72 | 6.36 | 10.44 | 6.96 | 6.64 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 16.56 | 9.04 | 10.92 | 10.20 | 13.72 |
| 6B70♂ | 5.88 | 6.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 7.36 | 8.56 | 5.76 | 5.72 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 10.00 | 17.80 | 8.24 | 9.44 | 7.48 |
| 6B102♂ | 19.68 | 11.68 | 6.84 | 7.12 | 6.48 |
| 6B103♂ | 5.92 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 5.24 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6E77♀ | 8.80 | 7.12 | 5.84 | 5.24 | 5.24 |
| 6B108♀ | 7.76 | 6.56 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 7.12 | 9.76 | 7.12 | 7.20 | 6.88 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 6.56 | 13.68 | 10.64 | 7.32 | 7.48 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 6.40 | 6.88 | 8.28 | 7.16 | 14.08 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 7.672 | 7.659 | 6.642 | 6.232 | 6.604 |

Table 1c. Maze Relearning by Inbred Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 6.32 | 8.12 | 7.92 | 6.04 | 6.00 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 14.76 | 11.72 | 8.72 | 9.28 | 7.84 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 7.76 | 7.48 | 8.32 | 6.48 | 6.60 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 8.84 | 5.92 | 10.20 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 6.200 | 5.966 | 6.067 | 5.660 | 5.587 |

Table 1c. Maze Relearning by Inbred Rats.

| Rat | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 6.16 | 6.72 | 7.00 | 9.56 | 8.28 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 8.84 | 8.88 | 9.48 | 12.92 | 8.36 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 6.32 | 6.40 | 5.72 | 6.36 | 6.28 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 5.634 | 5.669 | 5.680 | 6.029 | 5.718 |

Table 1c. Maze Relearning by Inbred Rats.

| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 15.24 | 7.28 | 7.32 | 8.36 | 6.60 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 7.72 | 11.44 | 10.80 | 14.36 | 11.48 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 6.20 | 6.40 | 7.20 | 6.72 | 5.84 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 6.046 | 5.834 | 5.844 | 6.061 | 5.771 |

Table 1c. Maze Relearning by Inbred Rats.

| Rat # | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 10.60 | 7.64 | 9.16 | 9.08 | 7.68 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 15.00 | 9.04 | 11.64 | 10.36 | 11.08 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 6.166 | 5.697 | 5.914 | 5.842 | 5.817 |

Table Ic. Maze Relearning by Inbred Rats.

| Rat # | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 10.64 | 9.08 | 6.72 | 8.04 | 6.84 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 9.92 | 11.56 | 8.88 | 11.48 | 14.44 |
| 6E70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6E71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6E72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6E73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6E101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6E102♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| 6E103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6E104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6E76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6E77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6E108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 5.901 | 5.905 | 5.640 | 5.846 | 5.939 |

Table Ic. Maze Relearning by Inbred Rats.

| Rat # | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 8.00 | 7.24 | 8.16 | 8.96 | 8.36 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 12.92 | 14.36 | 12.44 | 9.04 | 8.88 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 5.920 | 5.956 | 5.903 | 5.766 | 5.726 |

Table Ic. Maze Relearning by Inbred Rats.

| Rat # | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 7.40 | 10.56 | 8.36 | 10.12 | 9.68 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 8.52 | 9.00 | 9.88 | 7.48 | 10.12 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 5.657 | 5.848 | 5.779 | 5.745 | 5.861 |

Table 1c. Maze Relearning by Inbred Rats.

| Rat # | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|---------|--------|--------|--------|--------|--------|
| 6A71♂ | 11.88 | 8.52 | 9.64 | 10.08 | 8.04 |
| 6A72♂ | 5.56 | 5.56 | 5.56 | 5.56 | 5.56 |
| 6A73♂ | 11.16 | 10.40 | 11.28 | 7.84 | 8.64 |
| 6B70♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B71♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B72♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| 6B73♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| 6B101♂ | 5.96 | 5.96 | 5.96 | 5.96 | 5.96 |
| 6B102♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| 6B103♂ | 5.36 | 5.36 | 5.36 | 5.36 | 5.36 |
| 6B104♂ | 4.84 | 4.84 | 4.84 | 4.84 | 4.84 |
| 6B76♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| 6B77♀ | 5.24 | 5.24 | 5.24 | 5.24 | 5.24 |
| 6B108♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| 7A25♀ | 5.80 | 5.80 | 5.80 | 5.80 | 5.80 |
| 7A26♀ | ----- | ----- | ----- | ----- | ----- |
| 7A55♀ | 5.64 | 5.64 | 5.64 | 5.64 | 5.64 |
| 7A56♀ | ----- | ----- | ----- | ----- | ----- |
| 7A57♀ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| 7A89♀ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| 7A90♀ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| Average | 6.032 | 5.815 | 5.920 | 5.762 | 5.697 |

Table Ic. Maze Relearning by Inbred Rats.

| Rat # | Failed to relearn. | Days required to relearn. |
|--------|-----------------------|------------------------------|
| 6A71♂ | 1 | 50+ |
| 6A72♂ | | 3 |
| 6A73♂ | 1 | 50+ |
| 6B70♂ | | 8 |
| 6B71♂ | | 10 |
| 6B72♂ | | 4 |
| 6B73♂ | | 2 |
| 6B101♂ | | 11 |
| 6B102♂ | | 25 |
| 6B103♂ | | 7 |
| 6B104♂ | | 7 |
| 6B76♀ | | 4 |
| 6B77♀ | | 9 |
| 6B108♀ | | 8 |
| 7A25♀ | | 11 |
| 7A26♀ | | -- |
| 7A55♀ | | 11 |
| 7A56♀ | | -- |
| 7A57♀ | | 14 |
| 7A69♀ | | 3 |
| 7A90♀ | | 4 |
| Total | 2 | :Average 12.68+ |

Table Ic. Maze Relearning by Inbred Rats.

| Rat # | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|---------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| 6A71♂ | 199. | 203.7 | 1.7413 | .5590 | 78.27 |
| 6A72♂ | 207. | 218.6 | 1.7829 | .5737 | 78.60 |
| 6A73♂ | 205. | 153.0 | 1.7113 | .5916 | 78.78 |
| 6B70♂ | 202. | 204.0 | 1.7737 | .5331 | 78.64 |
| 6E71♂ | 203. | 193.2 | 1.7773 | .5223 | 78.46 |
| 6B72♂ | 198. | 191.2 | 1.7572 | .5081 | 78.71 |
| 6B73♂ | 204. | 215.4 | 1.7611 | .5478 | 78.96 |
| 6B101♂ | 210. | 220.3 | 1.7855 | .5892 | 78.21 |
| 6B102♂ | 200. | 193.5 | 1.7646 | .5454 | 78.00 |
| 6B103♂ | 215. | 240.2 | 1.7626 | .5500 | 78.21 |
| 6B104♂ | 208. | 224.9 | 1.8053 | .5208 | 78.33 |
| 6B76♀ | 188. | 168.4 | 1.7804 | .5380 | 78.59 |
| 6E77♀ | 177. | 139.0 | 1.6197 | .4610 | 78.77 |
| 6B108♀ | 194. | 165.1 | 1.7098 | .5033 | 78.32 |
| 7A25♀ | 195. | 175.0 | 1.7058 | .5563 | 78.35 |
| 7A26♀ | 189. | 166.6 | 1.6559 | .5227 | 78.38 |
| 7A55♀ | 181. | 147.2 | 1.6055 | .4775 | 78.69 |
| 7A56♀ | 177. | 126.5 | 1.5189 | .4883 | 78.78 |
| 7A57♀ | 176. | 136.6 | 1.6041 | .4936 | 78.56 |
| 7A89♀ | 193. | 170.9 | 1.6565 | .5304 | 78.31 |
| 7A90♀ | 182. | 144.5 | 1.6563 | .4868 | 78.51 |
| Average | 195.38 | 180.855 | 1.71122 | .52852 | 78.497 |

Table Id. Anatomical Data of Inbred Rats.

| Rat # | Water in cord % | Brain wt. in relation to body length. | Brain wt. in relation to body weight. | Age killed. Days. |
|---------|-----------------------|---------------------------------------------|---------------------------------------------|-------------------------|
| 6A71♂ | 70.89 | .87503 | .85483 | 234. |
| 6A72♂ | 71.36 | .86130 | .81560 | 234. |
| 6A73♂ | 70.25 | .83478 | 1.11850 | 190. |
| 6E70♂ | 72.22 | .87807 | .86912 | 190. |
| 6E71♂ | 72.01 | .87552 | .91993 | 190. |
| 6E72♂ | 72.56 | .88747 | .91904 | 190. |
| 6E73♂ | 72.65 | .86289 | .81760 | 190. |
| 6E101♂ | 72.00 | .85024 | .81049 | 262. |
| 6E102♂ | 70.92 | .88200 | .91194 | 178. |
| 6E103♂ | 71.13 | .81981 | .73381 | 178. |
| 6E104♂ | 71.39 | .86793 | .80271 | 178. |
| 6E76♀ | 72.75 | .94702 | 1.05701 | 175. |
| 6E77♀ | 72.67 | .91508 | 1.16525 | 175. |
| 6E108♀ | 71.47 | .88134 | 1.03561 | 178. |
| 7A25♀ | 71.63 | .87477 | .97474 | 239. |
| 7A26♀ | 71.55 | .87614 | .99394 | 239. |
| 7A55♀ | 71.41 | .88702 | 1.09035 | 165. |
| 7A56♀ | 72.58 | .85763 | 1.20071 | 231. |
| 7A57♀ | 71.39 | .91142 | 1.17430 | 165. |
| 7A89♀ | 71.49 | .85829 | .96928 | 206. |
| 7A90♀ | 71.86 | .91005 | 1.14623 | 206. |
| Average | 71.723 | .87685 | .97052 | 200. |

Table Id. Anatomical Data of Inbred Rats.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|------------|---------|---------|--------|--------|--------|
| S(CW)28♂ | 209.56 | 42.64 | 24.04 | 12.48 | 107.24 |
| S(CW)29♂ | 128.40 | 32.44 | 10.44 | 10.40 | 31.36 |
| S(BC)62♂ | 288.24 | 76.52 | 48.00 | 8.40 | 7.56 |
| S(BC)63♂ | 365.56 | 219.56 | 77.04 | 33.40 | 15.44 |
| S(C/EB)70♂ | 509.72 | 79.32 | 41.76 | 16.16 | 21.80 |
| S(CW)83♂ | 192.96 | 31.20 | 9.20 | 6.84 | 8.64 |
| S(CB)96♂ | 827.52 | 187.96 | 50.16 | 45.00 | 34.00 |
| S(CB)99♂ | 1125.12 | 596.24 | 120.60 | 48.96 | 22.80 |
| S(CH)137♂ | 120.36 | 23.44 | 9.52 | 5.24 | 7.20 |
| S(CH)138♂ | 650.32 | 23.36 | 9.00 | 5.76 | 12.48 |
| S(CH)139♂ | 72.80 | 41.56 | 25.92 | 12.84 | 4.96 |
| S(HC)23♀ | 528.76 | 101.20 | 30.76 | 50.00 | 19.48 |
| S(HC)25♀ | 149.32 | 24.40 | 17.24 | 13.04 | 6.64 |
| S(HW)59♀ | 319.24 | 191.88 | 97.92 | 27.28 | 41.84 |
| S(HW)60♀ | 297.60 | 38.12 | 59.36 | 17.24 | 13.48 |
| S(BC)64♀ | 266.44 | 43.84 | 37.12 | 37.40 | 35.64 |
| S(BC)66♀ | 259.56 | 117.40 | 78.80 | 35.64 | 34.04 |
| S(BC)67♀ | 254.52 | 91.56 | 65.88 | 41.00 | 33.36 |
| S(BC)69♀ | 3730.44 | 277.16 | 277.64 | 149.48 | 62.56 |
| S(CW)84 | 182.64 | 69.64 | 24.04 | 14.04 | 12.84 |
| S(CW)85♀ | 128.60 | 16.08 | 16.84 | 5.88 | 4.52 |
| Average | 505.128 | 110.739 | 53.851 | 28.404 | 25.613 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 16.12 | 11.16 | 6.24 | 6.48 | 5.56 |
| S(CW)29♂ | 8.52 | 5.80 | 5.00 | 5.56 | 7.56 |
| S(BC)62♂ | 7.96 | 7.16 | 6.08 | 5.12 | 37.00 |
| S(BC)63♂ | 9.68 | 7.08 | 6.60 | 6.24 | 5.84 |
| S(C/EB)70♂ | 11.52 | 7.84 | 7.24 | 8.36 | 6.64 |
| S(CW)83♂ | 16.16 | 6.00 | 5.72 | 13.28 | 6.32 |
| S(CB)98♂ | 26.32 | 19.72 | 21.08 | 15.08 | 7.76 |
| S(CB)99♂ | 20.80 | 16.64 | 15.88 | 14.60 | 16.40 |
| S(CH)137♂ | 6.36 | 4.88 | 5.20 | 5.52 | 7.84 |
| S(CH)138♂ | 8.04 | 8.48 | 7.28 | 6.84 | 5.08 |
| S(CH)139♂ | 6.04 | 6.16 | 4.52 | 4.44 | 5.20 |
| S(HC)23♀ | 51.16 | 25.32 | 38.68 | 23.60 | 12.12 |
| S(HC)25♀ | 7.56 | 8.24 | 5.44 | 8.92 | 4.88 |
| S(HW)59♀ | 39.36 | 23.68 | 20.64 | 22.20 | 5.08 |
| S(HW)60♀ | 6.12 | 27.68 | 24.52 | 43.64 | 13.32 |
| S(BC)64♀ | 15.64 | 12.32 | 13.28 | 9.32 | 8.76 |
| S(BC)66♀ | 27.68 | 9.04 | 12.72 | 9.28 | 11.68 |
| S(BC)67♀ | 38.44 | 29.68 | 20.28 | 15.68 | 15.80 |
| S(BC)69♀ | 22.80 | 32.92 | 14.04 | 8.80 | 6.80 |
| S(CW)84♀ | 11.32 | 6.80 | 6.16 | 19.76 | 5.72 |
| S(CW)85♀ | 7.08 | 4.40 | 5.08 | 8.52 | 6.64 |
| Average | 17.366 | 13.381 | 11.994 | 12.440 | 9.619 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.04 | 5.24 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.28 | 4.92 | 5.28 | 5.16 | 5.16 |
| S(BC)62♂ | 5.20 | 10.16 | 5.36 | 4.72 | 4.68 |
| S(BC)63♂ | 5.60 | 6.00 | 5.84 | 5.84 | 5.48 |
| S(C/BB)70 | 6.44 | 5.56 | 16.00 | 8.16 | 6.08 |
| S(CW)83♂ | 5.52 | 4.76 | 5.48 | 6.52 | 4.88 |
| S(CB)98♂ | 6.88 | 10.68 | 8.32 | 7.20 | 14.36 |
| S(CB)99♂ | 13.40 | 16.08 | 9.00 | 6.52 | 6.80 |
| S(CH)137♂ | 5.04 | 4.96 | 4.60 | 4.87 | 4.87 |
| S(CH)138♂ | 4.56 | 4.72 | 5.28 | 5.36 | 4.56 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 10.16 | 9.56 | 9.36 | 9.84 | 10.28 |
| S(HC)25♀ | 4.56 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 11.68 | 8.88 | 8.88 | 9.80 | 7.44 |
| S(HW)60♀ | 9.60 | 13.20 | 10.40 | 11.72 | 7.96 |
| S(BC)64♀ | 7.00 | 8.12 | 8.32 | 9.72 | 9.44 |
| S(BC)66♀ | 8.32 | 10.28 | 11.24 | 7.00 | 12.68 |
| S(BC)67♀ | 12.20 | 12.12 | 8.48 | 9.04 | 8.88 |
| S(BC)69♀ | 8.24 | 7.00 | 7.60 | 9.08 | 15.20 |
| S(CW)84♀ | 5.16 | 4.84 | 4.60 | 4.87 | 4.87 |
| S(CW)85♀ | 8.60 | 6.20 | 5.68 | 4.84 | 4.48 |
| Average | 7.295 | 7.748 | 7.354 | 6.904 | 7.277 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.64 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.12 | 5.84 | 7.36 | 6.32 | 5.64 |
| S(C/EB)70♂ | 5.84 | 5.80 | 5.40 | 8.44 | 7.00 |
| S(CW)83♂ | 6.52 | 6.24 | 5.36 | 4.68 | 4.64 |
| S(CB)98♂ | 8.88 | 7.52 | 6.44 | 6.92 | 5.72 |
| S(CB)99♂ | 5.84 | 7.16 | 6.32 | 8.16 | 6.44 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 9.52 | 4.52 | 5.60 | 4.64 | 4.80 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 6.92 | 7.08 | 5.44 | 6.64 | 5.36 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 10.28 | 5.12 | 5.04 | 4.52 | 4.89 |
| S(HW)60♀ | 12.52 | 7.32 | 4.56 | 8.40 | 5.52 |
| S(BC)64♀ | 6.48 | 10.72 | 9.48 | 11.88 | 7.12 |
| S(BC)66♀ | 8.00 | 10.88 | 9.00 | 6.88 | 11.24 |
| S(BC)67♀ | 8.48 | 11.12 | 7.92 | 6.68 | 7.24 |
| S(BC)69♀ | 7.04 | 6.68 | 7.00 | 7.24 | 8.28 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.72 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 6.687 | 6.428 | 5.900 | 6.209 | 5.851 |

Table IIa. Maze Learning by Normal Rats.

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| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 6.52 | 5.36 | 5.00 | 5.28 | 5.21 |
| S(C/EE)70♂ | 6.44 | 5.56 | 5.48 | 4.92 | 5.32 |
| S(CW)83♂ | 4.84 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 8.52 | 6.96 | 5.92 | 6.20 | 6.40 |
| S(CB)99♂ | 6.04 | 7.20 | 6.84 | 7.72 | 5.76 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 5.04 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.68 | 5.56 | 5.32 | 5.16 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.72 | 5.08 | 4.60 | 4.80 | 4.80 |
| S(BC)64♀ | 5.68 | 5.96 | 7.68 | 5.80 | 6.32 |
| S(BC)66♀ | 8.56 | 11.76 | 10.84 | 12.04 | 9.08 |
| S(BC)67♀ | 7.12 | 9.68 | 9.56 | 8.48 | 6.80 |
| S(BC)69♀ | 5.20 | 5.60 | 5.24 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.630 | 5.816 | 5.710 | 5.675 | 5.420 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/DB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 6.32 | 8.08 | 8.60 | 8.92 | 9.80 |
| S(CB)99♂ | 7.80 | 7.48 | 6.88 | 5.52 | 5.44 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 6.16 | 5.64 | 6.12 | 5.56 | 5.84 |
| S(BC)66♀ | 7.72 | 7.92 | 7.92 | 9.28 | 7.68 |
| S(BC)67♀ | 5.72 | 5.72 | 6.08 | 6.68 | 5.96 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.389 | 5.442 | 5.479 | 5.496 | 5.437 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 10.72 | 8.72 | 8.16 | 11.40 | 6.56 |
| S(CB)99♂ | 5.24 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.68 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 12.76 | 10.76 | 8.40 | 7.80 | 8.64 |
| S(BC)67♀ | 5.84 | 5.52 | 5.84 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.700 | 5.502 | 5.378 | 5.499 | 5.308 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(EC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 6.80 | 5.48 | 5.04 | 5.48 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 7.64 | 8.48 | 10.56 | 10.88 | 10.04 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.272 | 5.249 | 5.327 | 5.363 | 5.316 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 10.60 | 15.44 | 11.28 | 8.64 | 12.72 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.343 | 5.573 | 5.375 | 5.250 | 5.444 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/FB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 9.32 | 6.80 | 6.48 | 7.56 | 8.08 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.282 | 5.162 | 5.147 | 5.198 | 5.223 |

Table Iia. Maze Learning by Normal Rats.

| Rat # | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 10.16 | 10.96 | 7.44 | 16.32 | 8.88 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.322 | 5.360 | 5.192 | 5.615 | 5.261 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 8.40 | 7.20 | 10.92 | 9.40 | 8.80 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.286 | 5.181 | 5.358 | 5.286 | 5.257 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 11.76 | 23.40 | 19.00 | 9.68 | 9.44 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.398 | 5.952 | 5.743 | 5.299 | 5.288 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CH)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CE)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 10.64 | 10.52 | 7.04 | 10.96 | 8.08 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.345 | 5.339 | 5.173 | 5.360 | 5.223 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CE)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 8.52 | 6.96 | 6.12 | 7.72 | 5.72 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.244 | 5.170 | 5.130 | 5.206 | 5.110 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 7.24 | 9.44 | 6.96 | 6.40 | 12.24 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.183 | 5.288 | 5.170 | 5.143 | 5.421 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 8.92 | 8.36 | 7.84 | 7.76 | 6.76 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.263 | 5.236 | 5.211 | 5.208 | 5.160 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/ED)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 9.44 | 6.68 | 7.20 | 6.60 | 6.60 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.292 | 5.156 | 5.191 | 5.152 | 5.152 |

Table Iia. Maze Learning by Normal Rats.

| Rat # | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 8.80 | 5.40 | 6.36 | 7.80 | 6.88 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.257 | 5.095 | 5.141 | 5.210 | 5.166 |

Table IIa. Maze Learning by Normal Rats.

| Rat # | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|------------|--------|--------|--------|--------|---------|
| S(CW)28♂ | 5.28 | 5.28 | 5.28 | 5.28 | 5.28 |
| S(CW)29♂ | 5.16 | 5.16 | 5.16 | 5.16 | 5.16 |
| S(BC)62♂ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| S(BC)63♂ | 5.21 | 5.21 | 5.21 | 5.21 | 5.21 |
| S(C/EB)70♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CW)83♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(CB)98♂ | 5.33 | 5.33 | 5.33 | 5.33 | 5.33 |
| S(CB)99♂ | 5.40 | 5.40 | 5.40 | 5.40 | 5.40 |
| S(CH)137♂ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CH)138♂ | 4.83 | 4.83 | 4.83 | 4.83 | 4.83 |
| S(CH)139♂ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HC)23♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(HC)25♀ | 4.72 | 4.72 | 4.72 | 4.72 | 4.72 |
| S(HW)59♀ | 4.89 | 4.89 | 4.89 | 4.89 | 4.89 |
| S(HW)60♀ | 4.80 | 4.80 | 4.80 | 4.80 | 4.80 |
| S(BC)64♀ | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| S(BC)66♀ | 7.96 | 6.52 | 5.88 | 7.32 | 7.92 |
| S(BC)67♀ | 5.73 | 5.73 | 5.73 | 5.73 | 5.73 |
| S(BC)69♀ | 5.35 | 5.35 | 5.35 | 5.35 | 5.35 |
| S(CW)84♀ | 4.87 | 4.87 | 4.87 | 4.87 | 4.87 |
| S(CW)85♀ | 4.68 | 4.68 | 4.68 | 4.68 | 4.68 |
| Average | 5.217 | 5.149 | 5.118 | 5.187 | 5.215 |

Table IIa. Maze Learning by Normal Rats.

| Rat | Failed to learn. | Days required to learn. |
|------------|---------------------|----------------------------|
| S(CW)28♂ | | 12 |
| S(CW)29♂ | | 13 |
| S(BC)62♂ | | 16 |
| S(BC)63♂ | | 24 |
| S(C/ED)70♂ | | 24 |
| S(CW)83♂ | | 21 |
| S(CB)98♂ | | 39 |
| S(CB)99♂ | | 31 |
| S(CH)137♂ | | 13 |
| S(CH)138♂ | | 21 |
| S(CH)139♂ | | 10 |
| S(HC)23♀ | | 24 |
| S(HC)25♀ | | 12 |
| S(HW)59♀ | | 19 |
| S(HW)60♀ | | 23 |
| S(DC)64♀ | | 31 |
| S(BC)66♀ | 1 | 100+ |
| S(BC)67♀ | | 33 |
| S(BC)69♀ | | 23 |
| S(CW)84♀ | | 13 |
| S(CW)85♀ | | 16 |
| Total | 1 | 27.67+ |
| | :Average | |

Table IIa. Maze Learning by Normal Rats.

| Rat # | First trial after 60 days' rest. |
|------------|-------------------------------------|
| S(CW)28♂ | 44.00 |
| S(CW)29♂ | 23.80 |
| S(BC)62♂ | 25.60 |
| S(BC)63♂ | 21.20 |
| S(C/EB)70♂ | 64.60 |
| S(CW)83♂ | 8.80 |
| S(CB)98♂ | 72.40 |
| S(CB)99♂ | 108.40 |
| S(CH)137♂ | 81.80 |
| S(CH)138♂ | 9.20 |
| S(CH)139♂ | 15.80 |
| S(HC)23♀ | 186.60 |
| S(HC)25♀ | 107.80 |
| S(HW)59♀ | 37.60 |
| S(HW)60♀ | 65.00 |
| S(LC)64♀ | 42.20 |
| S(BC)66♀ | ----- |
| S(BC)67♀ | 57.20 |
| S(LC)69♀ | 188.20 |
| S(CW)84♀ | 17.40 |
| S(CW)85♀ | 15.20 |
| Average | 59.640 |

Table IIb. Absolute Retention of Normal Rats.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|------------|--------|--------|-------|-------|-------|
| S(CW)28♂ | 23.40 | 7.44 | 7.40 | 6.28 | 7.00 |
| S(CW)29♂ | 9.40 | 5.36 | 11.08 | 5.08 | 5.08 |
| S(BC)62♂ | 19.84 | 5.56 | 6.32 | 4.88 | 4.88 |
| S(BC)63♂ | 12.68 | 5.52 | 5.52 | 5.52 | 5.52 |
| S(C/EB)70♂ | 20.64 | 8.76 | 7.48 | 6.24 | 12.56 |
| S(CW)83♂ | 6.92 | 5.84 | 5.12 | 5.12 | 5.12 |
| S(CB)98♂ | 22.52 | 13.20 | 16.48 | 21.20 | 7.72 |
| S(CB)99♂ | 122.48 | 139.44 | 22.32 | 11.44 | 7.00 |
| S(CH)137♂ | 22.12 | 6.48 | 5.32 | 5.32 | 5.32 |
| S(CH)138♂ | 13.76 | 7.48 | 5.92 | 5.92 | 5.92 |
| S(CH)139♂ | 13.76 | 15.68 | 9.72 | 8.36 | 5.60 |
| S(HC)23♀ | 75.00 | 46.12 | 27.00 | 8.20 | 7.64 |
| S(HC)25♀ | 38.80 | 20.20 | 7.16 | 5.04 | 5.04 |
| S(HW)59♀ | 22.92 | 6.36 | 5.04 | 5.04 | 5.04 |
| S(HW)60♀ | 26.52 | 10.08 | 9.24 | 5.96 | 5.12 |
| S(BC)64♀ | 15.32 | 11.00 | 7.08 | 7.84 | 7.56 |
| S(BC)66♀ | ----- | ----- | ----- | ----- | ----- |
| S(BC)67♀ | 20.44 | 7.16 | 9.28 | 5.68 | 5.68 |
| S(BC)69♀ | 49.80 | 43.20 | 12.96 | 26.64 | 13.00 |
| S(CW)84♀ | 15.12 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)85♀ | 14.04 | 4.96 | 4.96 | 4.96 | 4.96 |
| Average | 28.574 | 18.752 | 9.530 | 7.996 | 6.548 |

Table IIc. Maze Relearning by Normal Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|------------|-------|-------|-------|-------|--------|
| S(CW)28♂ | 11.48 | 4.96 | 4.96 | 4.96 | 4.96 |
| S(CW)29♂ | 5.08 | 5.08 | 5.08 | 5.08 | 5.08 |
| S(BC)62♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| S(BC)63♂ | 5.52 | 5.52 | 5.52 | 5.52 | 5.52 |
| S(C/BE)70♂ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)83♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(CE)98♂ | 7.52 | 8.24 | 8.00 | 7.36 | 4.76 |
| S(CE)99♂ | 11.84 | 7.08 | 5.84 | 5.84 | 5.84 |
| S(CH)137♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CH)138♂ | 5.92 | 5.92 | 5.92 | 5.92 | 5.92 |
| S(CH)139♂ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| S(HC)23♀ | 13.04 | 6.32 | 5.32 | 5.32 | 5.32 |
| S(HC)25♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)59♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)60♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(BC)64♀ | 7.16 | 6.48 | 6.48 | 6.64 | 6.00 |
| S(BC)66♀ | ----- | ----- | ----- | ----- | ----- |
| S(IC)67♀ | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 |
| S(BC)69♀ | 16.80 | 14.52 | 14.16 | 9.60 | 12.04 |
| S(CW)84♀ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)85♀ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| Average | 7.076 | 6.064 | 5.922 | 5.670 | 5.630 |

Table IIc. Maze Relearning by Normal Rats.

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| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| S(CW)29♂ | 5.08 | 5.08 | 5.08 | 5.08 | 5.08 |
| S(BC)62♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| S(BC)63♂ | 5.52 | 5.52 | 5.52 | 5.52 | 5.52 |
| S(C/EB)70♂ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)83♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(CB)98♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| S(CB)99♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| S(CH)137♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CH)138♂ | 5.92 | 5.92 | 5.92 | 5.92 | 5.92 |
| S(CH)139♂ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| S(HC)23♀ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CH)25♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)59♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)60♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(BC)64♀ | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| S(BC)66♀ | ----- | ----- | ----- | ----- | ----- |
| S(BC)67♀ | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 |
| S(BC)69♀ | 9.60 | 6.12 | 8.04 | 7.72 | 8.80 |
| S(CW)84♀ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)85♀ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| Average | 5.508 | 5.434 | 5.430 | 5.414 | 5.468 |

Table IIc. Maze Relearning by Normal Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|------------|--------|--------|--------|--------|--------|
| S(CW)28♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| S(CW)29♂ | 5.08 | 5.08 | 5.08 | 5.08 | 5.08 |
| S(BC)62♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| S(BC)63♂ | 5.52 | 5.52 | 5.52 | 5.52 | 5.52 |
| S(C/EB)70♂ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)83♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(CB)98♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| S(CB)99♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| S(CH)137♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CH)138♂ | 5.92 | 5.92 | 5.92 | 5.92 | 5.92 |
| S(CH)139♂ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| S(HC)23♀ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(HC)25♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)59♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)60♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(BC)64♀ | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| S(BC)66♀ | ----- | ----- | ----- | ----- | ----- |
| S(BC)67♀ | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 |
| S(BC)69♀ | 18.84 | 7.92 | 9.24 | 6.52 | 8.24 |
| S(CW)84♀ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)85♀ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| Average | 5.970 | 5.424 | 5.490 | 5.354 | 5.440 |

Table IIc. Maze Relearning by Normal Rats.

| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 to 50 |
|------------|--------|--------|--------|--------|--------------|
| S(CW)28♂ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| S(CW)29♂ | 5.08 | 5.08 | 5.08 | 5.08 | 5.08 |
| S(BC)62♂ | 4.88 | 4.88 | 4.88 | 4.88 | 4.88 |
| S(BC)63♂ | 5.52 | 5.52 | 5.52 | 5.52 | 5.52 |
| S(C/EB)70♂ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)83♂ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(CB)98♂ | 4.76 | 4.76 | 4.76 | 4.76 | 4.76 |
| S(CB)99♂ | 5.84 | 5.84 | 5.84 | 5.84 | 5.84 |
| S(CH)137♂ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(CH)138♂ | 5.92 | 5.92 | 5.92 | 5.92 | 5.92 |
| S(CH)139♂ | 5.60 | 5.60 | 5.60 | 5.60 | 5.60 |
| S(IC)23♀ | 5.32 | 5.32 | 5.32 | 5.32 | 5.32 |
| S(IC)25♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)59♀ | 5.04 | 5.04 | 5.04 | 5.04 | 5.04 |
| S(HW)60♀ | 5.12 | 5.12 | 5.12 | 5.12 | 5.12 |
| S(BC)64♀ | 6.00 | 6.00 | 6.00 | 6.00 | 6.00 |
| S(BC)66♀ | ----- | ----- | ----- | ----- | ----- |
| S(BC)67♀ | 5.68 | 5.68 | 5.68 | 5.68 | 5.68 |
| S(BC)69♀ | 11.72 | 5.44 | 5.44 | 5.44 | 5.44 |
| S(CW)84♀ | 5.20 | 5.20 | 5.20 | 5.20 | 5.20 |
| S(CW)85♀ | 4.96 | 4.96 | 4.96 | 4.96 | 4.96 |
| Average | 5.614 | 5.300 | 5.300 | 5.300 | 5.300 |

Table IIc. Maze Relearning by Normal Rats.

| Rat # | Failed to relearn. | Days required to relearn. |
|------------|-----------------------|------------------------------|
| S(CW)28♂ | | 7 |
| S(CW)29♂ | | 4 |
| S(BC)62♂ | | 4 |
| S(BC)63♂ | | 2 |
| S(C/EB)70♂ | | 6 |
| S(CW)83♂ | | 3 |
| S(CE)98♂ | | 10 |
| S(CE)99♂ | | 8 |
| S(CH)137♂ | | 3 |
| S(CH)138♂ | | 3 |
| S(CH)139♂ | | 5 |
| S(HC)23♀ | | 8 |
| S(HC)25♀ | | 4 |
| S(HW)59♀ | | 3 |
| S(HW)60♀ | | 5 |
| S(BC)64♀ | | 10 |
| S(BC)66♀ | | -- |
| S(BC)67♀ | | 4 |
| S(BC)69♀ | | 22 |
| S(CW)84♀ | | 2 |
| S(CW)85♀ | | 2 |
| Total | 0 | :Average 5.75 |

Table IIc. Maze Relearning by Normal Rats.

| Rat # | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| S(CW)28♂ | 205. | 212.3 | 1.8762 | .5525 | 78.38 |
| S(CW)29♂ | 205. | 226.3 | 1.8139 | .5275 | 78.36 |
| S(BC)62♂ | 191. | 183.2 | 1.7865 | .5156 | 78.72 |
| S(BC)63♂ | 210. | 229.7 | 1.8426 | .6057 | 78.17 |
| S(C/EB)70♂ | 197. | 196.4 | 1.6764 | .5247 | 77.92 |
| S(CW)83♂ | 192. | 170.3 | 1.6221 | .4969 | 78.23 |
| S(CB)98♂ | 200. | 191.7 | 1.7801 | .5519 | 78.24 |
| S(CB)99♂ | 206. | 214.5 | 1.8088 | .6051 | 78.32 |
| S(CH)137♂ | 201. | 196.0 | 1.8201 | .5316 | 78.06 |
| S(CH)138♂ | 193. | 175.5 | 1.7724 | .5290 | 78.18 |
| S(CH)139♂ | 197. | 185.7 | 1.8027 | .5406 | 78.19 |
| S(HC)23♀ | 177. | 140.5 | 1.7793 | .4727 | 78.08 |
| S(HC)25♀ | 193. | 179.0 | 1.7345 | .5048 | 78.89 |
| S(HW)59♀ | 174. | 122.4 | 1.7335 | .4965 | 78.76 |
| S(HW)60♀ | 177. | 131.0 | 1.7508 | .5195 | 78.74 |
| S(BC)64♀ | 184. | 146.0 | 1.7094 | .5170 | 78.31 |
| S(BC)66♀ | 183. | 141.7 | 1.7064 | .5296 | 78.21 |
| S(BC)67♀ | 186. | 148.2 | 1.7345 | .5407 | 78.06 |
| S(BC)69♀ | 180. | 130.2 | 1.6393 | .4846 | 78.34 |
| S(CW)84♀ | 180. | 133.5 | 1.6337 | .5135 | 78.07 |
| S(CW)85♀ | 180. | 145.6 | 1.7122 | .5124 | 78.44 |
| Average | 191.00 | 171.41 | 1.74930 | .52740 | 78.319 |

Table IIId. Anatomical Data of Normal Rats.

| Rat # | Water in cord | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|------------|------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| S(CW)28♂ | 71.62 | .91522 | .88375 | 191. |
| S(CW)29♂ | 71.87 | .88483 | .80155 | 191. |
| S(BC)62♂ | 71.63 | .93534 | .97516 | 151. |
| S(BC)63♂ | 71.69 | .87743 | .80218 | 201. |
| S(C/FB)70♂ | 71.09 | .85096 | .85356 | 197. |
| S(CW)83♂ | 70.78 | .84484 | .95250 | 180. |
| S(CB)98♂ | 70.96 | .89005 | .92859 | 225. |
| S(CB)99♂ | 71.74 | .87806 | .84326 | 225. |
| S(CH)137♂ | 70.65 | .90552 | .92862 | 168. |
| S(CH)138♂ | 71.53 | .91834 | 1.00991 | 168. |
| S(CH)139♂ | 71.44 | .91508 | .97076 | 168. |
| S(HC)23♀ | 71.69 | 1.00525 | 1.26641 | 164. |
| S(HC)25♀ | 72.72 | .89870 | .96899 | 164. |
| S(HW)59♀ | 73.35 | .99626 | 1.41626 | 175. |
| S(HW)60♀ | 71.99 | .98915 | 1.34489 | 175. |
| S(BC)64♀ | 71.76 | .92902 | 1.17082 | 201. |
| S(BC)66♀ | 71.09 | .93246 | 1.20423 | 201. |
| S(BC)67♀ | 71.24 | .93253 | 1.17038 | 201. |
| S(BC)69♀ | 72.08 | .91072 | 1.25906 | 201. |
| S(CW)84♀ | 71.76 | .90761 | 1.22375 | 180. |
| S(CW)85♀ | 72.31 | .94900 | 1.17596 | 180. |
| Average | 71.666 | .91745 | 1.05479 | 186. |

Table IId. Anatomical Data of Normal Rats.

| <u>Learning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-----------------|---------|---------|--------|--------|--------|
| Inb. Avg. | 531.665 | 91.404 | 68.160 | 39.459 | 25.568 |
| Nor. Avg. | 505.128 | 110.739 | 53.851 | 28.404 | 25.613 |

| <u>Learning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 20.015 | 13.899 | 11.061 | 9.709 | 9.522 |
| Nor. Avg. | 17.366 | 13.381 | 11.994 | 12.440 | 9.619 |

| <u>Learning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 10.217 | 7.937 | 8.708 | 7.600 | 7.000 |
| Nor. Avg. | 7.295 | 7.748 | 7.354 | 6.904 | 7.277 |

| <u>Learning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.439 | 6.585 | 6.305 | 6.492 | 6.458 |
| Nor. Avg. | 6.687 | 6.428 | 5.900 | 6.209 | 5.851 |

| <u>Learning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.362 | 5.749 | 5.978 | 5.753 | 6.248 |
| Nor. Avg. | 5.630 | 5.816 | 5.710 | 5.675 | 5.420 |

| <u>Learning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.734 | 7.130 | 5.669 | 6.387 | 5.697 |
| Nor. Avg. | 5.389 | 5.442 | 5.479 | 5.496 | 5.437 |

| <u>Learning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.384 | 5.708 | 5.702 | 6.084 | 5.731 |
| Nor. Avg. | 5.700 | 5.502 | 5.378 | 5.499 | 5.308 |

Table III. Comparative Summary of Inbred and Normal Maze Results.

| <u>Learning</u> | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.590 | 5.476 | 5.494 | 5.540 | 5.848 |
| Nor. Avg. | 5.272 | 5.249 | 5.327 | 5.363 | 5.316 |

| <u>Learning</u> | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.640 | 5.978 | 5.631 | 5.526 | 13.456 |
| Nor. Avg. | 5.343 | 5.573 | 5.375 | 5.250 | 5.444 |

| <u>Learning</u> | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.734 | 7.400 | 6.602 | 5.713 | 5.840 |
| Nor. Avg. | 5.282 | 5.162 | 5.147 | 5.198 | 5.223 |

| <u>Learning</u> | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.844 | 5.522 | 5.353 | 5.416 | 5.707 |
| Nor. Avg. | 5.322 | 5.360 | 5.192 | 5.615 | 5.261 |

| <u>Learning</u> | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.924 | 5.640 | 5.458 | 5.621 | 6.740 |
| Nor. Avg. | 5.286 | 5.181 | 5.358 | 5.286 | 5.257 |

| <u>Learning</u> | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 8.347 | 6.442 | 6.177 | 5.425 | 5.686 |
| Nor. Avg. | 5.398 | 5.952 | 5.743 | 5.299 | 5.288 |

| <u>Learning</u> | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.880 | 5.630 | 5.442 | 5.621 | 5.396 |
| Nor. Avg. | 5.345 | 5.339 | 5.173 | 5.360 | 5.223 |

Table III. Comparative Summary of Inbred and Normal Maze Results.

| <u>Learning</u> | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.419 | 5.737 | 5.457 | 5.587 | 5.928 |
| Nor. Avg. | 5.244 | 5.170 | 5.130 | 5.206 | 5.110 |

| <u>Learning</u> | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.686 | 5.798 | 5.817 | 5.627 | 5.432 |
| Nor. Avg. | 5.183 | 5.288 | 5.170 | 5.143 | 5.421 |

| <u>Learning</u> | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.095 | 7.335 | 5.379 | 5.535 | 6.345 |
| Nor. Avg. | 5.263 | 5.236 | 5.211 | 5.208 | 5.160 |

| <u>Learning</u> | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.495 | 5.316 | 5.560 | 5.421 | 7.290 |
| Nor. Avg. | 5.288 | 5.156 | 5.181 | 5.152 | 5.152 |

| <u>Learning</u> | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.829 | 7.015 | 6.204 | 6.011 | 5.556 |
| Nor. Avg. | 5.257 | 5.095 | 5.141 | 5.210 | 5.166 |

| <u>Learning</u> | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|-----------------|--------|--------|--------|--------|---------|
| Inb. Avg. | 5.893 | 5.665 | 6.017 | 5.973 | 5.958 |
| Nor. Avg. | 5.217 | 5.149 | 5.118 | 5.187 | 5.215 |

| | Failed to learn. | Days required to learn. | Absolute retention. |
|-----------|---------------------|----------------------------|------------------------|
| Inb. Avg. | 2 | 36.62+ | 81.558 |
| Nor. Avg. | 1 | 24.67+ | 59.640 |

Table III. Comparative Summary of Inbred and Normal Maze Results.

| <u>Relearning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--------|--------|--------|-------|-------|
| Inb. Avg. | 35.415 | 12.208 | 10.069 | 9.560 | 8.069 |
| Nor. Avg. | 28.874 | 18.752 | 9.530 | 7.996 | 6.548 |

| <u>Relearning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------------|-------|-------|-------|-------|--------|
| Inb. Avg. | 7.672 | 7.659 | 6.642 | 6.232 | 6.604 |
| Nor. Avg. | 7.076 | 6.064 | 5.922 | 5.670 | 5.630 |

| <u>Relearning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.200 | 5.966 | 6.067 | 5.660 | 5.587 |
| Nor. Avg. | 5.508 | 5.434 | 5.430 | 5.414 | 5.468 |

| <u>Relearning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.634 | 5.660 | 5.680 | 6.029 | 5.718 |
| Nor. Avg. | 5.970 | 5.424 | 5.400 | 5.354 | 5.440 |

| <u>Relearning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.046 | 5.834 | 5.844 | 6.061 | 5.771 |
| Nor. Avg. | 5.614 | 5.300 | 5.300 | 5.300 | 5.300 |

| <u>Relearning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.166 | 5.697 | 5.914 | 5.842 | 5.817 |
| Nor. Avg. | 5.300 | 5.300 | 5.300 | 5.300 | 5.300 |

| <u>Relearning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.901 | 5.905 | 5.640 | 5.846 | 5.939 |
| Nor. Avg. | 5.300 | 5.300 | 5.300 | 5.300 | 5.300 |

Table III. Comparative Summary of Inbred and Normal Maze Results.

| Relearning | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.920 | 5.956 | 5.903 | 5.766 | 5.726 |
| Nor. Avg. | 5.300 | 5.300 | 5.300 | 5.300 | 5.300 |

| Relearning | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.657 | 5.848 | 5.779 | 5.745 | 5.861 |
| Nor. Avg. | 5.300 | 5.300 | 5.300 | 5.300 | 5.300 |

| Relearning | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.032 | 5.815 | 5.920 | 5.762 | 5.697 |
| Nor. Avg. | 5.300 | 5.300 | 5.300 | 5.300 | 5.300 |

| | Failed to relearn. | Days required to relearn. |
|-----------|-----------------------|------------------------------|
| Inb. Avg. | 2 | 12.68+ |
| Nor. Avg. | 0 | 5.75 |

| Anatomical Data | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|--------------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| Inb. Avg. | 195.38 | 180.55 | 1.71122 | .52852 | 78.497 |
| Nor. Avg. | 191.00 | 171.41 | 1.74930 | .52740 | 78.319 |

| Anatomical Data | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|--------------------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| Inb. Avg. | 71.723 | .87685 | .97052 | 200. |
| Nor. Avg. | 71.666 | .91745 | 1.05479 | 186. |

Table III. Comparative Summary of Inbred and Normal Maze Results.

| <u>Learning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-----------------|---------|---------|--------|--------|--------|
| 6th Avg. | 541.423 | 73.343 | 79.997 | 37.449 | 30.014 |
| 7th Avg. | 512.149 | 127.526 | 44.486 | 43.480 | 16.674 |

| <u>Learning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 24.457 | 16.371 | 10.646 | 10.486 | 9.789 |
| 7th Avg. | 11.131 | 8.954 | 11.891 | 8.154 | 8.989 |

| <u>Learning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 11.157 | 8.294 | 9.825 | 7.958 | 7.130 |
| 7th Avg. | 8.337 | 7.223 | 6.760 | 6.926 | 6.741 |

| <u>Learning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.767 | 6.690 | 6.350 | 6.376 | 6.421 |
| 7th Avg. | 5.781 | 6.376 | 6.216 | 6.724 | 6.530 |

| <u>Learning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.276 | 5.741 | 5.899 | 5.576 | 6.004 |
| 7th Avg. | 6.536 | 5.764 | 6.136 | 6.107 | 6.736 |

| <u>Learning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.604 | 5.716 | 5.455 | 5.441 | 5.466 |
| 7th Avg. | 5.993 | 9.959 | 6.096 | 8.279 | 6.159 |

| <u>Learning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.320 | 5.674 | 5.594 | 5.658 | 5.464 |
| 7th Avg. | 5.513 | 5.776 | 5.919 | 6.936 | 6.267 |

Table IV. Comparative Summary of 6th and 7th
Generation Inbred Maze Results.

1. The first part of the document is a list of names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

2. The second part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

3. The third part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

4. The fourth part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

5. The fifth part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

6. The sixth part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

7. The seventh part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

8. The eighth part of the document is a list of the names and addresses of the members of the committee. The names are listed in alphabetical order, and the addresses are listed below each name. The list is as follows:

| <u>Learning</u> | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.406 | 5.444 | 5.284 | 5.316 | 5.236 |
| 7th Avg. | 5.959 | 5.541 | 5.913 | 5.987 | 7.073 |

| <u>Learning</u> | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.399 | 5.853 | 5.396 | 5.261 | 5.461 |
| 7th Avg. | 6.124 | 6.227 | 6.101 | 6.056 | 29.444 |

| <u>Learning</u> | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.364 | 5.259 | 5.361 | 5.396 | 5.387 |
| 7th Avg. | 9.473 | 11.684 | 9.084 | 6.347 | 6.747 |

| <u>Learning</u> | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.713 | 5.447 | 5.230 | 5.244 | 5.647 |
| 7th Avg. | 6.107 | 5.673 | 5.599 | 5.759 | 5.827 |

| <u>Learning</u> | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.336 | 5.359 | 5.301 | 5.210 | 5.241 |
| 7th Avg. | 7.101 | 6.204 | 5.770 | 6.444 | 9.736 |

| <u>Learning</u> | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.333 | 5.366 | 5.312 | 5.198 | 5.209 |
| 7th Avg. | 14.376 | 8.593 | 7.907 | 5.879 | 6.639 |

| <u>Learning</u> | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.198 | 5.264 | 5.186 | 5.286 | 5.166 |
| 7th Avg. | 7.244 | 6.364 | 5.953 | 6.890 | 5.856 |

Table IV. Comparative Summary of 6th and 7th
Generation Inbred Maze Results.

| <u>Learning</u> | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.158 | 5.184 | 5.192 | 5.158 | 5.212 |
| 7th Avg. | 5.941 | 6.844 | 5.987 | 6.444 | 7.359 |

| <u>Learning</u> | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.249 | 5.189 | 5.209 | 5.269 | 5.169 |
| 7th Avg. | 6.559 | 7.016 | 7.033 | 6.341 | 5.959 |

| <u>Learning</u> | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.155 | 5.149 | 5.158 | 5.158 | 5.158 |
| 7th Avg. | 7.976 | 11.707 | 5.821 | 6.290 | 8.730 |

| <u>Learning</u> | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.158 | 5.158 | 5.158 | 5.158 | 5.158 |
| 7th Avg. | 6.170 | 5.633 | 6.364 | 5.947 | 11.553 |

| <u>Learning</u> | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|-----------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.158 | 5.158 | 5.158 | 5.158 | 5.158 |
| 7th Avg. | 7.170 | 10.730 | 8.296 | 7.719 | 6.353 |

| <u>Learning</u> | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|-----------------|--------|--------|--------|--------|---------|
| 6th Avg. | 5.158 | 5.158 | 5.158 | 5.158 | 5.158 |
| 7th Avg. | 7.364 | 6.679 | 7.736 | 7.604 | 7.559 |

| | Failed to learn. | Days required to learn. | Absolute retention. |
|----------|---------------------|----------------------------|------------------------|
| 6th Avg. | 0 | 32.93 | 65.443 |
| 7th Avg. | 2 | 44.00+ | 126.680 |

Table IV. Comparative Summary of 6th and 7th
Generation Inbred Maze Results.

| <u>Relearning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--------|--------|--------|--------|-------|
| 6th Avg. | 31.866 | 10.357 | 11.043 | 9.009 | 8.071 |
| 7th Avg. | 45.352 | 17.392 | 7.344 | 11.104 | 8.064 |

| <u>Relearning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------------|-------|-------|-------|-------|--------|
| 6th Avg. | 8.174 | 7.426 | 6.351 | 6.111 | 6.129 |
| 7th Avg. | 6.264 | 8.312 | 7.456 | 6.584 | 7.936 |

| <u>Relearning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.163 | 6.054 | 5.886 | 5.660 | 5.563 |
| 7th Avg. | 6.304 | 5.720 | 6.576 | 5.656 | 5.656 |

| <u>Relearning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.628 | 5.674 | 5.689 | 6.163 | 5.740 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

| <u>Relearning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.186 | 5.897 | 5.911 | 6.206 | 5.811 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

| <u>Relearning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.349 | 5.711 | 6.006 | 5.909 | 5.874 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

| <u>Relearning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.989 | 5.994 | 5.634 | 5.914 | 6.040 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

Table IV. Comparative Summary of 6th and 7th
Generation Inbred Maze Results.

| <u>Relearning</u> | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.014 | 6.063 | 5.991 | 5.806 | 5.751 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

| <u>Relearning</u> | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 5.657 | 5.917 | 5.823 | 5.777 | 5.934 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

| <u>Relearning</u> | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-------------------|--------|--------|--------|--------|--------|
| 6th Avg. | 6.166 | 5.871 | 6.014 | 5.800 | 5.711 |
| 7th Avg. | 5.656 | 5.656 | 5.656 | 5.656 | 5.656 |

| | Failed to relearn. | Days required to relearn. |
|----------|-----------------------|------------------------------|
| 6th Avg. | 2 | 14.14+ |
| 7th Avg. | 0 | 8.60 |

| Anatomical Data | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|--------------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| 6th Avg. | 200.71 | 195.04 | 1.75234 | .53881 | 78.49 |
| 7th Avg. | 184.71 | 152.47 | 1.63286 | .50794 | 78.51 |

| Anatomical Data | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|--------------------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| 6th Avg. | 71.73 | .87418 | .91653 | 196. |
| 7th Avg. | 71.70 | .88219 | 1.07851 | 207. |

Table IV. Comparative Summary of 6th and 7th
Generation Inbred Maze Results.

| <u>Learning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-----------------|---------|---------|--------|--------|--------|
| Nor. B | 849.458 | 187.729 | 88.511 | 36.160 | 29.689 |
| Except B | 248.380 | 52.997 | 27.857 | 15.085 | 22.557 |

| <u>Learning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 20.093 | 15.822 | 13.066 | 10.276 | 12.964 |
| Except B | 15.320 | 11.550 | 11.223 | 14.063 | 7.110 |

| <u>Learning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 8.142 | 9.544 | 8.907 | 7.476 | 9.289 |
| Except B | 6.652 | 6.393 | 6.190 | 6.475 | 5.768 |

| <u>Learning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 6.702 | 7.822 | 7.067 | 7.467 | 7.040 |
| Except B | 6.675 | 5.382 | 5.025 | 5.265 | 4.959 |

| <u>Learning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 6.529 | 6.973 | 6.804 | 6.719 | 6.102 |
| Except B | 4.956 | 4.948 | 4.888 | 4.892 | 4.908 |

| <u>Learning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 6.031 | 6.156 | 6.240 | 6.280 | 6.142 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 6.756 | 6.294 | 6.006 | 6.287 | 5.842 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

Table V. Comparative Summary of B Strain and
Normals Lacking B Maze Results.

| <u>Learning</u> | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.758 | 5.704 | 5.887 | 5.971 | 5.861 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.923 | 6.461 | 5.999 | 5.706 | 6.159 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.781 | 5.501 | 5.466 | 5.586 | 5.643 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.874 | 5.963 | 5.572 | 6.559 | 5.732 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.679 | 5.546 | 5.959 | 5.690 | 5.723 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 6.052 | 7.346 | 6.857 | 5.821 | 5.794 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.928 | 5.914 | 5.528 | 5.963 | 5.643 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

Table V. Comparative Summary of B Strain and
Normals Lacking B Maze Results.

| <u>Learning</u> | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.692 | 5.519 | 5.426 | 5.603 | 5.381 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.550 | 5.794 | 5.519 | 5.457 | 6.106 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.746 | 5.673 | 5.617 | 5.608 | 5.497 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.794 | 5.488 | 5.546 | 5.479 | 5.479 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|-----------------|--------|--------|--------|--------|--------|
| Nor. B | 5.723 | 5.346 | 5.452 | 5.612 | 5.510 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| <u>Learning</u> | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|-----------------|--------|--------|--------|--------|---------|
| Nor. B | 5.630 | 5.470 | 5.399 | 5.559 | 5.626 |
| Except B | 4.908 | 4.908 | 4.908 | 4.908 | 4.908 |

| | Failed to learn | Days required to learn. | Absolute retention. |
|----------|--------------------|----------------------------|------------------------|
| Nor. B | 1 | 35.67+ | 72.475 |
| Except B | 0 | 16.42 | 51.083 |

Table V. Comparative Summary of B Strain and
Normals Lacking B Maze Results.

| <u>Relearning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--------|--------|--------|--------|-------|
| Nor. B | 36.215 | 29.230 | 10.930 | 11.180 | 7.990 |
| Except B | 23.480 | 11.767 | 8.597 | 5.873 | 5.587 |

| <u>Relearning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------------|-------|-------|-------|-------|--------|
| Nor. B | 8.075 | 7.200 | 6.970 | 6.340 | 6.240 |
| Except B | 6.410 | 5.307 | 5.223 | 5.223 | 5.223 |

| <u>Relearning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------------|--------|--------|--------|--------|--------|
| Nor. B | 5.935 | 5.750 | 5.740 | 5.700 | 5.835 |
| Except B | 5.223 | 5.223 | 5.223 | 5.223 | 5.223 |

| <u>Relearning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-------------------|--------|--------|--------|--------|--------|
| Nor. B | 7.090 | 5.725 | 5.890 | 5.550 | 5.765 |
| Except B | 5.223 | 5.223 | 5.223 | 5.223 | 5.223 |

| <u>Relearning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 to 50 |
|-------------------|--------|--------|--------|--------|--------------|
| Nor. B | 6.200 | 5.415 | 5.415 | 5.415 | 5.415 |
| Except B | 5.223 | 5.223 | 5.223 | 5.223 | 5.223 |

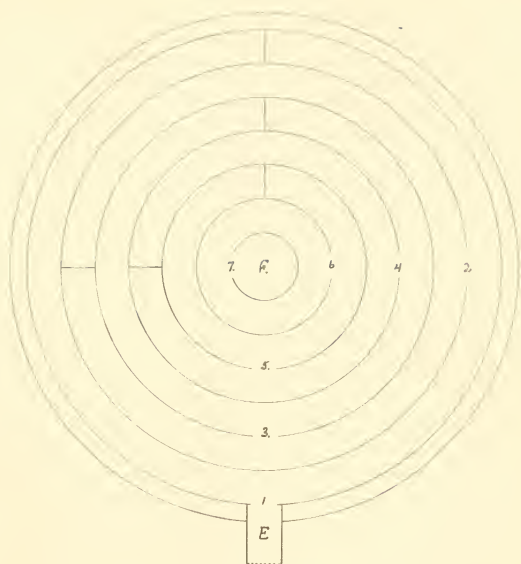
| | Failed to relearn. | Days required to relearn. |
|----------|-----------------------|------------------------------|
| Nor. B | 0 | 8.24 |
| Except B | 0 | 4.08 |

Table V. Comparative Summary of B Strain and
Normals Lacking B Maze Results.

| Anatomical Data | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|--------------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| Nor. B | 193.00 | 175.73 | 1.75378 | .54191 | 78.25 |
| Except F | 189.50 | 168.18 | 1.75428 | .51646 | 78.37 |

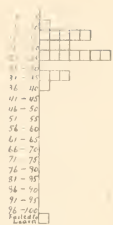
| Anatomical Data | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|--------------------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| Nor. B | 71.48 | .90406 | 1.02303 | 200. |
| Except B | 71.81 | .92748 | 1.07861 | 175. |

Table V. Comparative Summary of B Strain and
Normals Lacking B. Maze Results.

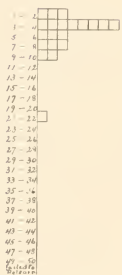


The Watson Maze.

Plate I.

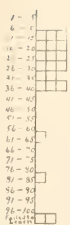


Learning

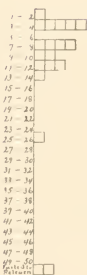


Rearing

Normal



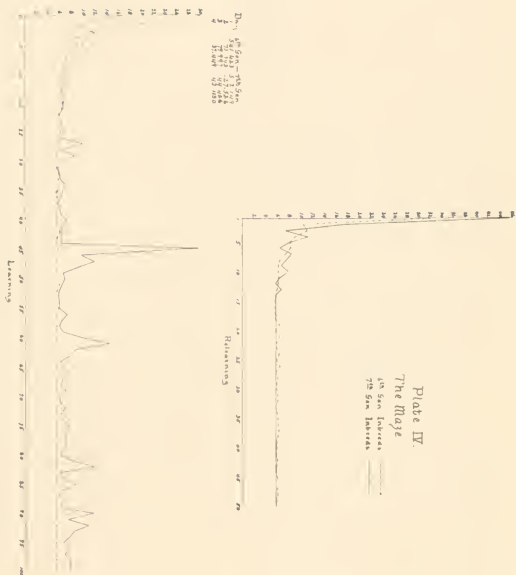
Learning



Rearing

Inbred.

Plate III.
The Maze.
Distribution of
Learning and
Rearing.



IV. EXPERIMENT 2: THE PRELIMINARY INCLINED PLANE.

The apparatus used in this experiment (see Plate VI) was designed especially to make a problem exceptionally difficult to learn, and in this purpose it succeeded beyond expectation. The basic principle is the same as that of the apparatus used by Watson¹ in his experiments at the University of Chicago, described and illustrated in his monograph "Animal Education," page 37. But my apparatus differs from his in several respects.

¹Watson, Animal Education, Chicago, 1903.

Plate VI shows in detail the construction and method of operation. The food box, A, is framed of wood, 11 x 12 inches base, 11 inches in height and covered by $\frac{3}{8}$ inch heavy wire mesh. It is fitted with a hard rubber door, d, $\frac{3}{16}$ inch thick, 5 inches high and $4\frac{1}{4}$ inches wide. To the door is fastened a cord which passes over a pulley, p, and is weighted at the other end with a piece of lead, l, of sufficient weight to insure the opening of the door upon releasing the latch. B shows the device for latching and releasing the door. A short distance above the door is fastened a 3 inch electrical magnet, m; directly below that is a steel wire, s.w., surmounted by a steel disk, s.d., of the same diameter as the core of the magnet. The steel wire holds the door by dropping through holes in two brass plates, g, which serve as guides, to a point, behind another brass plate which is set at the top of and behind the door, $1\frac{1}{2}$ mm below the top of the door.

The setscrew, s.s., placed on the wire above the lower guide prevents any further drop. When the steel wire holds the door the disk is 2mm. below the magnet; when the disk is drawn up to the magnet, 1/2mm. clearance is allowed for the door. Back of the feeding box A, is placed the inclined plane, I.P.

The inclined plane has a hard rubber base 3/8 inch thick, 6 inches long and 2 3/8 inches wide. Upon standards at the middle of the base rests the plane itself. The plane is of wood fibre and of the same dimensions as the base. The plane is weighted at the end nearest the box in order to insure its return to position after use. At the end opposite the weight, platinum electrical contacts, e.c., are placed in both base and plane. The power is provided through wires connecting with the regular electric lighting system, direct current, 115 volts. A 32 c.p. lamp is placed in the series in order to avoid any danger of short-circuiting. In order to make the contact and allow the current to pass through the magnet, thus raising the steel wire and releasing the door, it is necessary for the rat to step on the point of operation, o, which lies well out toward the end of the plane. On account of a certain amount of latency in the operation of the magnet, the rat must not only make the contacts touch, but must also inhibit further action, remaining on point o until the click of the disk meeting the magnet is heard. Over the food box and plane is placed a cage constructed of 1/2 inch heavy wire mesh, the base measurements of which are 24 x 24 inches and the height 14 inches. This allows the rat ample room to explore on all sides and above the food box. When the rat is within the entrance, e, to the cage is closed.

The preliminary inclined plane experiment was not intended so much as a decisive experiment as to test the ef-

iciency of the apparatus. The results, however, are significant and, therefore, included here.

The object of the experiment was to have each rat learn to reach the interior of the food box from the entrance to the cage in the least possible time. The procedure of a perfectly trained rat was, to run from the entrance, e, to the point of operation, o, remaining there until the click of the disk against the magnet insured the door being open, then running through the door of the box to the food which was placed within at point f. The starting time was taken when the animal entered at e, another when the magnet clicked, and the final time when the food box was entered. The object of taking the two times was that differences in association between the inbred series and the control might be compared. But as in both series the association was practically perfect after the second day such comparison is useless.

In preparation, each animal, beginning at the age of sixty-five days, was fed alone in the food box ten minutes daily for five consecutive days. During this period the door of the food box was allowed to remain open, thus giving the rat an opportunity to become acquainted with all parts of the interior of both box and cage. At the age of seventy days the experiment began. Six males and five females from the inbred strain were used and, as control, an equal number of males and females from the normal series. All the inbred rats were from the 6th generation. The stimulus used was their regular food, bread soaked in milk.

As one of the first rats used took fourteen hours before his first accidental success, it was decided to use "cumulative" time for the first few trials. By this method each rat was allowed to work thirty minutes and then, if un-

successful, he was taken out while the door was opened, and he was then returned to feed for five minutes and used no more that day. When they began to succeed within the half hour, each rat was required to open and enter the food box five times each day. At the end of the fifth trial it was allowed to feed for five minutes, but permitted no more food until the completion of the next day's experiment. Each rat was used daily for twenty days. As a time limit had been placed, no criterion of perfect learning was established for this experiment. At the conclusion of the learning experiment the rats were fed in the runway which has already been described for sixty days. At the end of this period they were tested for retention, and were worked for five days in order to ascertain the effects of the previous training.

The results of the experiment for the inbred rats are given in tables VIa, VIb, and VIc; for the normal control series in tables VIIa, VIIb, and VIIc. These tables give only the averages of the five daily trials of individual rats. Tables VIa and VIIa show, respectively, the daily average time in seconds of the inbred and normal control series during the process of forming the inclined plane habit. The time includes both opening the door at the plane and entering the food box.

Tables VIb and VIIb show the absolute retention of the inbred and normal control series respectively. These tables show the absolute retention of the normal control series to be stronger than that of the inbred.

Tables VIc and VIIc serve only to show individual daily averages during the five days of testing for the effects of previous training. The individual anatomical data can with the above be better treated in the comparative summaries.

Table VIII presents a comparative summary consisting of the daily averages of all the inbred and all the control rats. From this table are constructed the comparative curves of learning. From the eleventh day the figures for learning time of the normal rats are less than those of the inbreds. The absolute retention of the normals is stronger than that of the inbreds. In the five trials to test the effects of previous training the time of the normals is less each day than that of the inbred rats.

In these criteria of ability the rats of the normal control series are shown, on the average, to be superior to those of the inbred series. Body length of the inbred rats used in the preliminary inclined plane is, on the average, slightly greater than is the case with the normals; body weight, however, is a trifle less. The average actual brain weight of the inbreds is less than that of the normals. The relative brain weight (in reference to body length) of the inbreds is 11.61% less than that of the normals. The relative brain weight (in reference to body weight) of the inbreds is 11.65% less than that of the normals. Although killed at a later age, the percentage of water in brain and cord of the inbreds is greater than is the case with the normals.

The tables of comparative summaries of preliminary inclined plane results support the hypothesis that the deterioration of brain weight in a strain of rats is accompanied by deterioration in the ability to form habits.

In Plate VII is shown the curve of learning (left) and of relearning (right) of the inbred rats compared with those of the normal control. The inbred curve is shown by the solid line, that of the control by the broken line. The ordinates give the time in seconds, and the abscissae the number

of the day in which such time was made. Both learning curves are irregular, but on the eleventh day that of the control series passes permanently below that of the inbred. The curves of relearning show that the inbreds had failed to benefit by practice to so great an extent as the normal control.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---------|----------|----------|--------|--------|--------|
| 6B82♂ | 2166.68 | 1032.08 | 25.28 | 21.76 | 13.12 |
| 6B83♂ | 1721.36 | 1511.68 | 129.32 | 15.04 | 9.00 |
| 6B84♂ | 488.44 | 151.12 | 57.76 | 13.12 | 13.96 |
| 6B85♂ | 3022.24 | 7067.24 | 28.68 | 15.96 | 16.24 |
| 6B87♀ | 392.00 | 105.24 | 16.68 | 24.04 | 26.56 |
| 6B88♀ | 3424.56 | 720.40 | 42.72 | 47.52 | 8.44 |
| 6B89♀ | 3787.04 | 5444.32 | 15.64 | 25.92 | 4.92 |
| 6B50♀ | 4722.96 | 297.76 | 65.64 | 33.84 | 133.16 |
| 6B51♀ | 636.00 | 932.64 | 122.40 | 233.16 | 4.20 |
| 6A61♂ | 394.04 | 267.20 | 40.12 | 53.08 | 72.44 |
| 6A62♂ | 869.12 | 413.28 | 119.08 | 21.64 | 7.24 |
| Average | 1965.858 | 1631.178 | 60.302 | 45.916 | 28.116 |

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|---------|--------|--------|-------|--------|--------|
| 6B82♂ | 5.00 | 3.48 | 3.24 | 4.40 | 6.56 |
| 6B83♂ | 9.80 | 12.72 | 7.76 | 5.00 | 5.24 |
| 6B84♂ | 5.64 | 15.04 | 4.48 | 17.80 | 6.20 |
| 6B85♂ | 15.68 | 6.40 | 4.80 | 12.36 | 4.92 |
| 6B87♀ | 10.28 | 8.20 | 18.52 | 5.76 | 9.32 |
| 6B88♀ | 20.48 | 8.12 | 16.08 | 8.48 | 6.04 |
| 6B89♀ | 5.80 | 6.24 | 9.52 | 10.00 | 4.76 |
| 6B50♀ | 13.44 | 4.56 | 13.32 | 6.04 | 5.48 |
| 6B51♀ | 3.60 | 66.20 | 4.80 | 5.84 | 8.28 |
| 6A61♂ | 28.08 | 25.52 | 11.48 | 5.44 | 16.76 |
| 6A62♂ | 4.52 | 6.68 | 6.04 | 104.28 | 4.64 |
| Average | 11.120 | 14.833 | 9.095 | 16.855 | 7.109 |

Table VIa. Preliminary Inclined Plane Learning

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|---------|--------|--------|--------|--------|--------|
| 6B82♂ | 5.16 | 7.88 | 8.60 | 11.68 | 7.28 |
| 6B83♂ | 4.68 | 6.00 | 10.40 | 9.00 | 8.64 |
| 6B84♂ | 5.56 | 9.60 | 5.68 | 22.16 | 33.72 |
| 6B85♂ | 8.68 | 8.16 | 9.36 | 8.84 | 7.00 |
| 6B87♀ | 5.24 | 24.60 | 7.40 | 5.64 | 4.92 |
| 6B88♀ | 3.56 | 6.32 | 10.88 | 33.24 | 12.04 |
| 6B89♀ | 4.40 | 4.04 | 5.24 | 4.64 | 16.76 |
| 6B50♀ | 12.36 | 19.92 | 4.80 | 5.44 | 5.48 |
| 6B51♀ | 3.40 | 4.76 | 3.68 | 3.96 | 5.72 |
| 6A61♂ | 5.40 | 6.28 | 8.96 | 9.72 | 6.96 |
| 6A62♂ | 10.44 | 6.56 | 9.24 | 5.76 | 4.68 |
| Average | 6.262 | 9.465 | 7.658 | 10.916 | 10.291 |

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|---------|--------|--------|--------|--------|--------|
| 6B82♂ | 10.08 | 5.60 | 4.96 | 5.00 | 4.84 |
| 6B83♂ | 3.12 | 6.16 | 7.36 | 3.68 | 21.44 |
| 6B84♂ | 8.76 | 6.08 | 6.04 | 7.96 | 29.40 |
| 6B85♂ | 6.28 | 10.92 | 3.36 | 3.56 | 10.12 |
| 6B87♀ | 3.64 | 3.16 | 3.60 | 11.08 | 7.52 |
| 6B88♀ | 8.28 | 5.04 | 5.96 | 3.68 | 8.28 |
| 6B89♀ | 3.84 | 4.40 | 3.36 | 4.68 | 5.52 |
| 6B50♀ | 6.88 | 5.48 | 10.60 | 27.20 | 8.44 |
| 6B51♀ | 6.00 | 4.72 | 4.88 | 17.24 | 3.68 |
| 6A61♂ | 19.60 | 8.24 | 3.28 | 6.36 | 5.48 |
| 6A62♂ | 4.48 | 8.92 | 7.44 | 6.48 | 8.04 |
| Average | 7.360 | 6.247 | 5.531 | 8.811 | 10.251 |

Table VIa. Preliminary Inclined Plane Learning

| Rat # | First trial after 60 days' rest. |
|---------|-------------------------------------|
| <hr/> | |
| 6B82♂ | 18.20 |
| 6B83♂ | 7.80 |
| 6B84♂ | 215.20 |
| 6B85♂ | 162.20 |
| 6B87♀ | 17.40 |
| 6B88♀ | 37.80 |
| 6B89♀ | 7.60 |
| 6B50♀ | 14.40 |
| 6B51♀ | 148.80 |
| 6A61♂ | 6.80 |
| 6A62♂ | 16.20 |
| <hr/> | |
| Average | 59.309 |
| <hr/> | |

Table VIb. Absolute Retention of Inbred Rats.

Preliminary Inclined Plane.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---------|--------|-------|--------|-------|-------|
| 6B82♂ | 7.00 | 5.24 | 4.64 | 6.72 | 6.60 |
| 6B83♂ | 7.96 | 5.56 | 6.16 | 9.92 | 7.84 |
| 6B84♂ | 74.16 | 7.16 | 4.16 | 3.12 | 2.96 |
| 6B85♂ | 36.92 | 11.12 | 22.84 | 18.08 | 8.64 |
| 6B87♀ | 11.60 | 6.72 | 6.72 | 10.96 | 17.84 |
| 6B88♀ | 16.44 | 8.92 | 17.20 | 5.40 | 6.08 |
| 6B89♀ | 6.36 | 4.56 | 2.76 | 3.96 | 3.60 |
| 6B50♀ | 22.80 | 19.60 | 21.92 | 12.32 | 12.76 |
| 6B51♀ | 34.48 | 18.44 | 13.40 | 8.24 | 8.72 |
| 6A61♂ | 10.12 | 7.56 | 9.28 | 6.16 | 3.80 |
| 6A62♂ | 39.48 | 14.08 | 17.60 | 4.76 | 7.72 |
| Average | 24.302 | 9.905 | 11.516 | 8.149 | 7.869 |

Table VIc. Preliminary Inclined Plane Relearning
by Inbred Rats.

| Rat # | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|---------|-----------------------|-------------------------|--------------------------|-------------------------|---------------------|
| 6B82♂ | 194. | 178.0 | 1.6737 | .5207 | 77.98 |
| 6B83♂ | 198. | 199.4 | 1.6951 | .4771 | 79.01 |
| 6B84♂ | 200. | 194.8 | 1.6707 | .5048 | 78.37 |
| 6B85♂ | 192. | 170.4 | 1.6110 | .4846 | 78.00 |
| 6B87♀ | 189. | 156.2 | 1.7264 | .4980 | 78.48 |
| 6B88♀ | 189. | 157.2 | 1.3144 | .3753 | 78.67 |
| 6B89♀ | 187. | 151.3 | 1.6407 | .4591 | 78.56 |
| 6B50♀ | 189. | 146.9 | 1.6710 | .4777 | 79.00 |
| 6B51♀ | 189. | 154.4 | 1.7077 | .4881 | 78.93 |
| 6A61♂ | 192. | 171.0 | 1.6109 | .4947 | 78.69 |
| 6A62♂ | 180. | 151.9 | 1.5048 | .4487 | 78.52 |
| Average | 190.82 | 166.50 | 1.62031 | .47535 | 78.565 |

| Rat # | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|-------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| 6B82♂ | 70.02 | .86273 | .94028 | 203. |
| 6B83♂ | 72.21 | .85611 | .85010 | 203. |
| 6B84♂ | 70.68 | .83535 | .85765 | 203. |
| 6B85♂ | 70.64 | .83906 | .94542 | 203. |
| 6B87♀ | 71.00 | .91344 | 1.10525 | 203. |
| 6B88♀ | 71.49 | .69544 | .83613 | 203. |
| 6B89♀ | 71.27 | .87738 | 1.08440 | 203. |
| 6B50♀ | 72.30 | .88413 | 1.13750 | 181. |
| 6B51♀ | 72.44 | .90355 | 1.10602 | 181. |
| 6A61♂ | 71.96 | .83901 | .94205 | 177. |
| 6A62♂ | 71.79 | .83600 | .99065 | 177. |

Table VIIA. Preliminary Inclined Plane Learning
by Normal Rats.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|----------|----------|---------|--------|--------|--------|
| S(C)2Q | 1253.32 | 3082.84 | 47.80 | 24.72 | 14.44 |
| S(C)3Q | 801.68 | 193.32 | 41.92 | 35.92 | 10.76 |
| S(C)4Q | 6664.36 | 74.72 | 36.60 | 17.64 | 5.72 |
| S(C)5♂ | 471.28 | 412.84 | 37.80 | 23.80 | 28.20 |
| S(C)6♂ | 5085.76 | 497.36 | 56.36 | 25.00 | 5.64 |
| S(C)7♂ | 595.44 | 649.60 | 186.12 | 31.40 | 68.76 |
| S(C)8♂ | 839.24 | 3188.76 | 139.88 | 15.40 | 7.48 |
| S(C)9Q | 6592.40 | 986.12 | 84.60 | 30.68 | 8.32 |
| S(C)10Q | 3422.72 | 25.32 | 21.64 | 19.28 | 19.36 |
| S(HC)19♂ | 909.32 | 1321.00 | 136.24 | 13.32 | 18.84 |
| S(HC)20♂ | 528.80 | 250.24 | 88.56 | 66.04 | 52.72 |
| Average | 2470.393 | 971.102 | 79.775 | 27.564 | 21.840 |

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|----------|--------|--------|-------|-------|--------|
| S(C)2Q | 40.96 | 28.20 | 14.16 | 16.04 | 14.60 |
| S(C)3Q | 8.48 | 4.84 | 10.36 | 10.12 | 9.16 |
| S(C)4Q | 6.80 | 8.20 | 12.52 | 11.20 | 5.44 |
| S(C)5♂ | 17.28 | 5.80 | 4.04 | 5.28 | 3.24 |
| S(C)6♂ | 12.72 | 7.44 | 13.92 | 12.80 | 12.28 |
| S(C)7♂ | 35.44 | 11.68 | 8.44 | 8.20 | 3.24 |
| S(C)8♂ | 16.04 | 10.24 | 7.08 | 5.36 | 12.32 |
| S(C)9Q | 32.92 | 8.68 | 8.60 | 9.08 | 14.24 |
| S(C)10Q | 15.20 | 8.80 | 6.92 | 6.80 | 4.96 |
| S(HC)19♂ | 17.64 | 8.28 | 10.72 | 7.84 | 4.80 |
| S(HC)20♂ | 19.88 | 11.96 | 11.80 | 5.96 | 4.36 |
| Average | 20.305 | 10.375 | 9.869 | 8.971 | 8.058 |

Table VIIa. Preliminary Inclined Plane Learning
by Normal Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|----------|--------|--------|--------|--------|--------|
| S(C)2♀ | 4.60 | 3.96 | 4.92 | 6.44 | 11.36 |
| S(C)3♀ | 4.88 | 5.88 | 3.32 | 3.08 | 3.56 |
| S(C)4♀ | 7.48 | 4.68 | 5.20 | 5.36 | 5.56 |
| S(C)5♂ | 3.40 | 3.48 | 3.84 | 1.92 | 2.28 |
| S(C)6♂ | 7.76 | 7.08 | 6.92 | 3.08 | 3.76 |
| S(C)7♂ | 8.64 | 5.68 | 3.88 | 2.96 | 2.20 |
| S(C)8♂ | 5.84 | 4.12 | 11.76 | 7.08 | 8.16 |
| S(C)9♀ | 4.92 | 6.08 | 5.56 | 5.00 | 3.28 |
| S(C)10♀ | 2.64 | 6.48 | 2.64 | 4.40 | 2.48 |
| S(HC)19♂ | 5.52 | 4.92 | 4.12 | 5.36 | 4.00 |
| S(HC)20♂ | 3.08 | 2.80 | 3.44 | 4.00 | 3.00 |
| Average | 5.342 | 5.015 | 5.055 | 4.425 | 4.513 |

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|----------|--------|--------|--------|--------|--------|
| S(C)2♀ | 7.08 | 5.28 | 9.76 | 19.96 | 16.16 |
| S(C)3♀ | 10.40 | 6.20 | 4.36 | 4.72 | 4.92 |
| S(C)4♀ | 9.32 | 4.36 | 4.40 | 8.44 | 5.76 |
| S(C)5♂ | 2.44 | 1.84 | 2.56 | 3.20 | 2.28 |
| S(C)6♂ | 5.16 | 3.00 | 6.20 | 4.72 | 3.88 |
| S(C)7♂ | 2.16 | 2.28 | 2.44 | 2.64 | 2.12 |
| S(C)8♂ | 2.92 | 2.68 | 2.40 | 2.36 | 2.52 |
| S(C)9♀ | 3.20 | 2.60 | 6.76 | 3.28 | 3.68 |
| S(C)10♀ | 2.16 | 4.44 | 5.04 | 4.20 | 4.64 |
| S(HC)19♂ | 8.80 | 5.72 | 5.08 | 4.56 | 8.80 |
| S(HC)20♂ | 2.04 | 2.60 | 3.80 | 5.88 | 7.08 |
| Average | 5.062 | 3.727 | 4.600 | 5.815 | 5.622 |

Table VIIa. Preliminary Inclined Plane Learning
by Normal Rats.

| Rat # | First trial after 60 day's rest. |
|----------|-------------------------------------|
| <hr/> | |
| S(C)2♀ | 6.80 |
| S(C)3♀ | 17.60 |
| S(C)4♀ | 31.20 |
| S(C)5♂ | 12.00 |
| S(C)6♂ | 61.80 |
| S(C)7♂ | 34.80 |
| S(C)8♂ | 15.20 |
| S(C)9♀ | 8.80 |
| S(C)10♀ | 331.00 |
| S(HC)19♂ | 5.80 |
| S(HC)20♂ | 12.60 |
| <hr/> | |
| Average | 49.164 |
| <hr/> | |

Table VIIb. Absolute Retention of Normal Rats.

Preliminary Inclined Plane.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|----------|--------|-------|-------|-------|-------|
| S(C)2♀ | 4.32 | 4.80 | 3.96 | 2.32 | 4.68 |
| S(C)3♀ | 12.64 | 5.36 | 2.48 | 2.68 | 13.04 |
| S(C)4♀ | 9.08 | 2.80 | 3.64 | 5.60 | 6.40 |
| S(C)5♂ | 5.20 | 2.72 | 1.80 | 2.40 | 1.84 |
| S(C)6♂ | 16.88 | 5.20 | 6.04 | 5.48 | 4.48 |
| S(C)7♂ | 12.84 | 3.12 | 2.48 | 2.68 | 5.92 |
| S(C)8♂ | 9.44 | 4.32 | 6.80 | 5.32 | 4.16 |
| S(C)9♀ | 12.20 | 8.44 | 6.52 | 7.36 | 5.52 |
| S(C)10♀ | 96.52 | 13.24 | 21.76 | 3.60 | 19.52 |
| S(HC)19♂ | 3.96 | 5.28 | 4.56 | 5.84 | 3.44 |
| S(HC)20♂ | 6.04 | 5.20 | 4.52 | 3.60 | 4.16 |
| Average | 17.102 | 5.498 | 5.869 | 4.262 | 6.651 |

Table VIIc. Preliminary Inclined Plane Relcarning
by Normal Rats.

| Rat # | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|----------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| S(C)2♀ | 179. | 142.6 | 1.7851 | .4877 | 77.83 |
| S(C)3♀ | 187. | 152.0 | 1.8488 | .5461 | 78.08 |
| S(C)4♀ | 179. | 147.1 | 1.7656 | .5087 | 78.15 |
| S(C)5♂ | 185. | 159.5 | 1.7498 | .5061 | 77.91 |
| S(C)6♂ | 197. | 185.2 | 2.0237 | .5890 | 78.14 |
| S(C)7♂ | 192. | 161.5 | 1.7990 | .4998 | 78.10 |
| S(C)8♂ | 206. | 199.4 | 1.8975 | .5454 | 77.80 |
| S(C)9♀ | 183. | 158.4 | 1.7390 | .4970 | 77.94 |
| S(C)10♀ | 193. | 197.0 | 1.8230 | .5575 | 78.10 |
| S(HC)19♂ | 197. | 198.2 | 1.8392 | .5599 | 78.37 |
| S(HC)20♂ | 186. | 148.0 | 1.7432 | .5129 | 77.38 |
| Average | 189.45 | 168.08 | 1.81946 | .52819 | 77.982 |

| Rat # | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days |
|----------|-----------------------|-----------------------------------------------|-----------------------------------------------|------------------------|
| S(C)2♀ | 71.38 | .99726 | 1.25182 | 167. |
| S(C)3♀ | 71.05 | .98866 | 1.21632 | 167. |
| S(C)4♀ | 71.59 | .98648 | 1.20041 | 167. |
| S(C)5♂ | 71.49 | .94584 | 1.09705 | 160. |
| S(C)6♂ | 71.17 | 1.02726 | 1.09271 | 183. |
| S(C)7♂ | 71.43 | .93698 | 1.11393 | 160. |
| S(C)8♂ | 70.10 | .92112 | .95160 | 183. |
| S(C)9♀ | 71.35 | .95027 | 1.09785 | 180. |
| S(C)10♀ | 71.17 | .94456 | .92538 | 180. |
| S(HC)19♂ | 71.35 | .93360 | .92795 | 164. |
| S(HC)20♂ | 70.33 | .93720 | 1.17784 | 164. |

| <u>Learning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-----------------|----------|----------|--------|--------|--------|
| Inb. Avg. | 1965.858 | 1631.178 | 60.302 | 45.916 | 28.116 |
| Nor. Avg. | 2470.393 | 971.102 | 79.775 | 27.564 | 21.840 |

| <u>Learning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-----------------|--------|--------|-------|--------|--------|
| Inb. Avg. | 11.120 | 14.833 | 9.095 | 16.855 | 7.109 |
| Nor. Avg. | 20.305 | 10.375 | 9.869 | 8.971 | 8.058 |

| <u>Learning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.262 | 9.465 | 7.658 | 10.916 | 10.291 |
| Nor. Avg. | 5.342 | 5.015 | 5.055 | 4.425 | 4.513 |

| <u>Learning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 7.360 | 6.247 | 5.531 | 8.811 | 10.251 |
| Nor. Avg. | 5.062 | 3.727 | 4.800 | 5.815 | 5.622 |

Absolute
retention.

| | |
|-----------|--------|
| Inb. Avg. | 59.309 |
| Nor. Avg. | 49.164 |

| <u>Relearning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--------|-------|--------|-------|-------|
| Inb. Avg. | 24.302 | 9.905 | 11.516 | 8.149 | 7.869 |
| Nor. Avg. | 17.102 | 5.498 | 5.869 | 4.262 | 6.651 |

Table VIII. Comparative Summary of Inbred and Normal Inclined Plane (Preliminary) Results.

| Anatomical Data | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|--------------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| Inb. Avg. | 190.82 | 166.50 | 1.62031 | .47535 | 78.565 |
| Nor. Avg. | 189.45 | 168.08 | 1.81946 | .52819 | 77.982 |

| Anatomical Data | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|--------------------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| Inb. Avg. | 71.436 | .84929 | .98140 | 194. |
| Nor. Avg. | 71.128 | .96084 | 1.09571 | 170. |

Table VIII. Comparative Summary of Inbred and Normal Preliminary Inclined Plane Results.

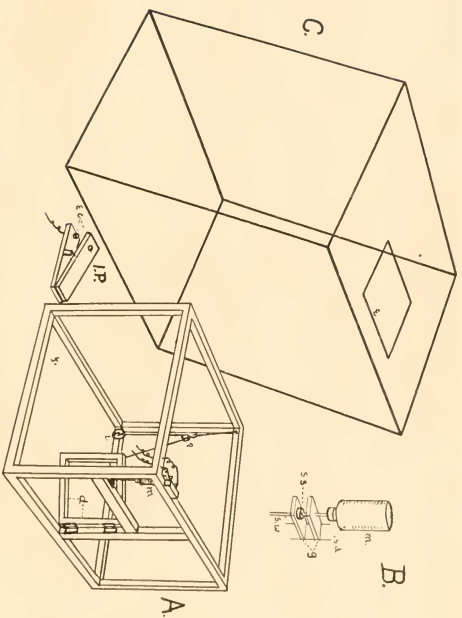


Plate VI. The Inclined Plane.





Plate VII
Preliminary Inbred Plane
Inbred Strain
Normal Control

V. EXPERIMENT 3: THE INCLINED PLANE.

The apparatus used in this experiment was the same as that used in Experiment 2: the Preliminary Inclined Plane. The animals were prepared in the same way as for the previous experiment, and began work at the age of seventy days. Sixteen males and fourteen females from the inbred strain were used and, as control, an equal number of males and females from the normal series. Of the inbred rats, fifteen were from the 7th generation, fourteen from the 8th and one from the ninth. As the behavior of the single ninth generation rat was no worse than the average of the 8th her results have been included in the tables and curves of the 8th generation. The stimulus used in this experiment was bread soaked in milk.

Cumulative time was used in the earlier trials as in the previous experiment. When the rats began to succeed within the half hour, each rat was required to open and enter the food box three times each day. At the end of the third trial it was allowed to feed in the box for five minutes, but was permitted no more food until the completion of the next day's experiment. Each rat was used daily until it had learned the problem perfectly, the criterion of perfection being three perfect trials for each of three successive days. A perfect trial consisted in running from the entrance to the point of operation on the plane at the rear of the box, opening the door, running around and entering the box, all within four seconds; but, if the time consumed in opening the box after passing the entrance was more than two seconds, or, if the time consumed in entering the box after having opened the door was more than two seconds, the trial was considered a failure.

It was possible for a rat to have a perfect trial in four seconds, or a failure in a less total time. Those rats failing to learn within one hundred days (300 trials) were no longer used for experimentation. Those rats learning the inclined plane were, at the conclusion of the experiment, fed for sixty days in the runway. At the end of this period they were tested for retention and relearning.

Three of the rats formed the habit of lifting the plane at the end nearest the box and thus forming the contact, but it apparently affected neither the rapidity of each trial nor the number of days required for perfect learning. One of the normal rats placed his nose between the electrical contacts and received a shock, but beyond one squeal and a vigorous rubbing of his nose, he showed no sign of harm and had apparently forgotten the experience the next day. Some of the rats jumped to the point of operation from a distance; some placed the fore paws on the end of the plane and pressed down; and still others ran slowly around to the plane, halting an instant on the point of operation, and then continued the run around to the door. As in the maze, many of the inbred rats were subject to errors which persisted throughout the experiment.

The results of the experiments for the inbred rats are given in tables IXa, IXb, and IXc; for the normal control series in tables Xa, Xb, and Yc. These tables give only the averages of the three daily trials of individual rats. The shortest period of learning for an inbred rat was twelve days; for a normal control, nine days. Eleven inbred rats and one normal failed to learn the inclined plane problem within one hundred days. As in the maze tables, after recording the three perfect days of any one rat, the average of the time for those three days was recorded on each succeeding day in red ink.

It is necessary to preserve these figures in order to compute the total daily averages based upon which the curves of learning are constructed. The particular value of tables IX and X is that they give the data in detail from which the tables of comparative summaries are constructed.

In table XI is presented a comparative summary consisting of the daily averages of all the inbred and all the control rats used in the inclined plane experiment. From this table are constructed the comparative curves of learning. The table shows that eleven of the inbred and two of the normal rats failed to learn the inclined plane. The inbreds required, on the average, 73.70+ days to learn; the normals but 45.97+. The absolute retention of the inbreds was, on the average, 31.842 seconds; of the normals, 22.587 seconds. All the inbreds had relearned at the end of the twenty-fourth day; but all the normals had relearned at the end of the seventeenth day. The inbreds required, on the average 6.74 days to relearn; the normals but 4.68.

In all these criteria of ability the rats of the normal control series are shown, on the average, to be superior to those of the inbred series.

The body length of the inbred rats used in the inclined plane is, on the average a trifle greater than that of the normals; the body weight is slightly less. The average actual brain weight of the inbreds is less than that of the normals. The relative brain weight (in reference to body length) of the inbreds is 5.69% less than that of the normals. The relative brain weight (in reference to body weight) of the inbreds is 2.38% less than that of the normals. Although the inbred rats were killed, on the average, at a more advanced age than the normal control, the percentage of water in brain

and cord is higher.

The tables of comparative summaries of inclined plane results support the hypothesis that the deterioration of brain weight in a strain of rats is accompanied by deterioration in the ability to form habits.

In Plate VIII is shown the curve of learning (below) and of relearning (above) of the inbred rats compared with those of the normal control. The inbred curve is shown by the solid line, that of the control by the broken line. The ordinates give the average time in seconds, and the abscissae the number of the day in which such time was made. As in the other learning curves, the average time for the first four days is given in figures. The descent for the first ten days is quite rapid, with one or two lapses. From the forty-first day the normal curve lies entirely below the four second mark. The inbred curve, throughout, shows great irregularities, especially on the thirtieth day when it rises to an average of nearly twenty-eight seconds. The inbred curve of relearning is very similar to that of the normal, and from the twenty-third day coincides with it. But it must be remembered that only the best of the inbreds were used in the relearning experiment; eleven had failed to learn as against only two of the normals. The inbreds used had all relearned at the end of the twenty-fourth day; the normals at the end of the seventeenth day.

In Plate IX may be seen the distribution curves of learning of both the inbred and control series for the inclined plane experiment. The time is given in days -- in groups of five for learning, singly for relearning. As is the case with the maze experiment, it is very apparent that the advantage lies wholly in favor of the normal control series.

Of the inbred rats used in the inclined plane experi-

ment, fifteen were from the 7th generation, fourteen from the 8th and one from the 9th. In Table XII is shown a comparative summary consisting of the daily averages of all the 7th and all the 8th generations (including with the 8th the one 9th generation rat). The table shows that four of the 7th generation and seven of the 8th generation failed to learn the inclined plane. The 7th generation required, on the average, 59.60 days to learn; the 8th generation, 86.53. The absolute retention of the 7th generation was, on the average 44.945 seconds; of the 8th generation, 13.825 seconds. All the 7th generation had relearned at the end of the twenty-fourth day; but all the 8th generation had relearned by the end of the eighth day. The 7th generation required, on the average, 8.00 days to relearn; the 8th generation but 5.00 days.

In these criteria of ability the 7th generation excelled in learning; the 8th in absolute retention and relearning. But seven of the 8th generation as against but four of the 7th had failed to learn, and for that reason not tested for relearning. There seems, on the whole but little difference, but in the learning where all were used the advantage lies with the 7th generation.

The body length and body weight of the 7th generation average greater than those of the 8th. The average actual brain weight of the 7th generation is greater than that of the 8th. The relative brain weight of the 7th generation (in reference to body length) is 5.20% less than that of the 8th generation. The relative brain weight (in reference to body weight) of the 7th generation is 13.93% less than that of the 8th. The relative brain weights of the inbred rats used in the inclined plane has not deteriorated from one generation to another, but has increased. The percentage of water in brain

and cord of the 7th generation is greater than in the 8th.

In Plate X is shown the curve of learning (below) and of relearning (above) of the 7th and 8th generations of inbred rats. The 7th generation curve is shown by the broken line; that of the 8th generation by the solid line. The ordinates give the time in seconds, and the abscissae the number of the day in which such time was made. Both curves in the learning series are very irregular, but more particularly that of the 8th generation rats. Although irregular, the 7th generation curve lies below that of the 8th except in a few instances. After the first day, the relearning curves are similar and very regular, although that of the 8th generation remains below the 7th all the way. But only the best of the two generations were used, four of the 7th and seven of the 8th having been discarded on account of not having learned the inclined plane.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---------|----------|----------|---------|--------|--------|
| 7B56♂ | 15677.93 | 1205.60 | 139.93 | 50.60 | 30.00 |
| 7B57♂ | 814.73 | 1978.93 | 207.93 | 108.67 | 61.27 |
| 7B58♂ | 1791.53 | 3299.80 | 80.60 | 36.27 | 16.33 |
| 7B69♂ | 7113.87 | 4745.00 | 591.27 | 336.20 | 44.00 |
| 7B70♂ | 3413.33 | 2029.80 | 93.53 | 30.60 | 8.73 |
| 7B71♂ | 3901.20 | 403.60 | 14.07 | 14.07 | 17.07 |
| 7B72♂ | 2377.60 | 836.67 | 139.80 | 91.67 | 20.13 |
| 7B73♂ | 5334.73 | 787.80 | 33.80 | 7.00 | 6.00 |
| 7A66♂ | 16621.33 | 57.00 | 16.40 | 12.27 | 4.13 |
| 7A67♂ | 5442.67 | 94.40 | 68.27 | 9.13 | 6.73 |
| 7A88♂ | 3760.53 | 2453.47 | 75.33 | 10.13 | 3.73 |
| 8B36♂ | 1067.60 | 542.33 | 97.40 | 29.27 | 12.53 |
| 8B37♂ | 18014.07 | 111.60 | 20.80 | 8.47 | 10.13 |
| 8B39♂ | 704.80 | 909.20 | 641.20 | 156.20 | 80.13 |
| 8B10♂ | 9870.60 | 645.60 | 89.20 | 24.20 | 18.27 |
| 8E11♂ | 4953.20 | 2722.60 | 429.53 | 75.20 | 19.33 |
| 7B59♀ | 1117.40 | 1997.27 | 254.80 | 41.53 | 16.73 |
| 7B60♀ | 2279.80 | 1099.93 | 82.13 | 27.67 | 10.13 |
| 7A91♀ | 10499.07 | 171.67 | 20.60 | 20.27 | 4.67 |
| 7A92♀ | 4702.47 | 794.67 | 29.73 | 7.67 | 7.73 |
| 8B40♀ | 365.13 | 852.20 | 113.13 | 52.27 | 51.73 |
| 8E16♀ | 3861.40 | 1068.80 | 44.27 | 123.53 | 10.87 |
| 8E17♀ | 2045.27 | 124.53 | 48.93 | 29.87 | 14.40 |
| 8E18♀ | 1405.33 | 490.40 | 217.80 | 101.27 | 111.27 |
| 8E19♀ | 3048.00 | 173.87 | 52.00 | 3.73 | 3.93 |
| 8E114♀ | 2022.27 | 1484.60 | 90.40 | 36.40 | 11.80 |
| 8E115♀ | 1546.60 | 2134.27 | 361.13 | 80.13 | 21.67 |
| 8E116♀ | 2988.27 | 1038.13 | 106.60 | 11.13 | 12.33 |
| 8A38♀ | 2652.20 | 1870.47 | 463.33 | 82.07 | 18.40 |
| 9E130♀ | 801.00 | 445.07 | 386.00 | 79.80 | 33.60 |
| Average | 4673.131 | 1218.976 | 166.997 | 56.576 | 22.926 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 31.20 | 30.07 | 6.67 | 9.67 | 8.07 |
| 7B57♂ | 8.87 | 22.07 | 6.67 | 5.00 | 3.60 |
| 7B58♂ | 7.40 | 10.27 | 13.87 | 3.67 | 4.93 |
| 7B69♂ | 33.93 | 6.27 | 10.60 | 3.40 | 2.67 |
| 7B70♂ | 7.40 | 8.47 | 13.73 | 10.20 | 6.53 |
| 7B71♂ | 21.67 | 15.93 | 6.00 | 8.33 | 5.20 |
| 7B72♂ | 3.73 | 13.73 | 11.13 | 10.07 | 9.00 |
| 7B73♂ | 2.93 | 4.73 | 4.67 | 2.40 | 4.27 |
| 7A86♂ | 4.67 | 3.33 | 3.07 | 9.60 | 4.80 |
| 7A87♂ | 6.93 | 19.27 | 9.53 | 24.73 | 8.20 |
| 7A88♂ | 7.73 | 4.20 | 8.53 | 8.07 | 4.80 |
| 8B36♂ | 12.07 | 3.80 | 5.20 | 11.93 | 5.27 |
| 8B37♂ | 6.47 | 8.80 | 10.27 | 45.33 | 13.73 |
| 8B39♂ | 18.53 | 15.87 | 4.07 | 12.73 | 21.07 |
| 8B10♂ | 5.07 | 4.07 | 4.87 | 12.47 | 26.33 |
| 8E11♂ | 14.20 | 22.20 | 8.73 | 2.93 | 2.60 |
| 7B59♀ | 8.80 | 9.27 | 5.93 | 16.87 | 12.13 |
| 7B60♀ | 11.67 | 10.73 | 10.60 | 7.20 | 5.33 |
| 7A91♀ | 3.47 | 3.53 | 3.60 | 3.87 | 2.67 |
| 7A92♀ | 6.73 | 8.73 | 7.80 | 9.40 | 5.60 |
| 8E40♀ | 51.13 | 15.73 | 7.20 | 17.40 | 18.60 |
| 8E16♀ | 41.80 | 30.73 | 4.40 | 8.47 | 5.00 |
| 8E17♀ | 628.80 | 14.87 | 28.27 | 4.73 | 6.47 |
| 8E18♀ | 60.07 | 12.40 | 14.73 | 8.13 | 8.20 |
| 8E19♀ | 8.40 | 4.27 | 4.47 | 4.20 | 4.20 |
| 8B114♀ | 7.33 | 9.20 | 34.67 | 7.13 | 7.47 |
| 8B115♀ | 15.73 | 35.07 | 6.13 | 6.73 | 8.67 |
| 8B116♀ | 7.27 | 7.80 | 6.67 | 7.07 | 8.27 |
| 8A38♀ | 52.13 | 10.93 | 38.87 | 22.73 | 12.33 |
| 9B130♀ | 10.20 | 6.33 | 30.87 | 17.87 | 8.07 |
| Average | 36.878 | 12.422 | 11.061 | 10.751 | 8.136 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 19.47 | 6.80 | 10.13 | 4.33 | 6.67 |
| 7B57♂ | 14.47 | 6.27 | 7.87 | 7.07 | 8.47 |
| 7B58♂ | 7.67 | 6.87 | 8.87 | 5.93 | 3.73 |
| 7B69♂ | 3.20 | 2.87 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 5.00 | 6.47 | 7.53 | 5.33 | 16.60 |
| 7B71♂ | 6.47 | 5.33 | 9.67 | 5.00 | 4.47 |
| 7B72♂ | 9.93 | 1.87 | 4.67 | 8.47 | 4.73 |
| 7B73♂ | 5.87 | 5.40 | 2.87 | 8.27 | 7.33 |
| 7A86♂ | 5.20 | 5.07 | 5.13 | 3.67 | 5.47 |
| 7A87♂ | 45.87 | 4.33 | 6.73 | 2.67 | 2.60 |
| 7A88♂ | 4.27 | 6.20 | 6.27 | 2.87 | 6.67 |
| 8B36♂ | 4.40 | 16.47 | 17.13 | 6.27 | 7.47 |
| 8B37♂ | 5.40 | 4.40 | 4.27 | 5.80 | 3.20 |
| 8B39♂ | 14.40 | 13.33 | 6.80 | 14.53 | 6.47 |
| 8B10♂ | 13.93 | 4.60 | 8.27 | 8.07 | 21.40 |
| 8B11♂ | 12.40 | 7.20 | 21.67 | 7.47 | 21.13 |
| 7B59♀ | 5.00 | 5.13 | 8.07 | 3.60 | 9.27 |
| 7B60♀ | 8.00 | 10.87 | 3.33 | 9.33 | 6.40 |
| 7A91♀ | 3.07 | 2.60 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 19.33 | 5.80 | 3.73 | 5.73 | 7.40 |
| 8B40♀ | 5.60 | 7.27 | 15.20 | 5.27 | 6.47 |
| 8B16♀ | 9.27 | 20.53 | 10.73 | 10.20 | 4.67 |
| 8B17♀ | 8.47 | 5.60 | 19.80 | 5.53 | 10.33 |
| 8B18♀ | 3.67 | 13.20 | 10.73 | 22.73 | 48.07 |
| 8B19♀ | 6.40 | 3.40 | 17.67 | 3.47 | 3.47 |
| 8B114♀ | 5.27 | 6.07 | 5.47 | 9.13 | 15.13 |
| 8B115♀ | 10.93 | 10.27 | 9.13 | 9.73 | 12.67 |
| 8B116♀ | 6.47 | 22.07 | 3.47 | 11.47 | 8.27 |
| 8A38♀ | 8.93 | 16.27 | 8.73 | 10.07 | 15.00 |
| 9B130♀ | 3.13 | 3.73 | 8.93 | 7.93 | 8.53 |
| Average | 9.383 | 7.876 | 8.625 | 7.188 | 9.586 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 4.73 | 4.60 | 8.47 | 13.07 | 13.00 |
| 7B57♂ | 7.60 | 3.40 | 10.13 | 14.00 | 5.47 |
| 7B58♂ | 6.80 | 5.80 | 2.33 | 1.80 | 2.13 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 4.40 | 5.00 | 2.93 | 8.07 | 8.40 |
| 7B71♂ | 19.17 | 4.33 | 5.27 | 5.07 | 5.73 |
| 7B72♂ | 1.87 | 7.80 | 2.60 | 3.87 | 1.80 |
| 7B73♂ | 5.33 | 4.47 | 5.13 | 8.73 | 5.27 |
| 7A86♂ | 4.80 | 3.33 | 13.67 | 3.47 | 3.00 |
| 7A87♂ | 2.40 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 8.80 | 4.87 | 6.00 | 7.47 | 7.93 |
| 8B36♂ | 4.33 | 7.67 | 6.33 | 4.93 | 6.60 |
| 8B37♂ | 11.20 | 3.27 | 2.60 | 7.13 | 6.20 |
| 8B39♂ | 7.53 | 4.60 | 10.87 | 10.40 | 6.20 |
| 8B10♂ | 26.13 | 33.87 | 19.80 | 8.20 | 7.40 |
| 8B11♂ | 13.13 | 8.67 | 15.87 | 6.53 | 2.80 |
| 7B59♀ | 3.93 | 3.73 | 3.33 | 5.13 | 7.47 |
| 7B60♀ | 7.13 | 9.00 | 6.47 | 8.67 | 6.67 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 4.67 | 6.40 | 26.13 | 7.67 | 4.53 |
| 8B40♀ | 10.93 | 4.80 | 3.60 | 8.80 | 4.73 |
| 8B16♀ | 9.47 | 2.47 | 7.33 | 11.53 | 10.53 |
| 8B17♀ | 7.33 | 3.07 | 3.40 | 4.53 | 4.93 |
| 8B18♀ | 6.00 | 6.27 | 9.07 | 9.40 | 7.67 |
| 8B19♀ | 8.07 | 4.60 | 9.87 | 5.60 | 15.73 |
| 8B114♀ | 7.60 | 10.87 | 11.20 | 5.60 | 6.20 |
| 8B115♀ | 11.20 | 7.60 | 2.93 | 4.80 | 9.27 |
| 8B116♀ | 14.40 | 3.07 | 6.13 | 5.73 | 18.67 |
| 8A38♀ | 34.13 | 56.60 | 6.53 | 82.40 | 5.60 |
| 9B130♀ | 2.53 | 3.67 | 4.67 | 4.87 | 9.33 |
| Average | 8.710 | 8.069 | 7.364 | 9.191 | 6.717 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 7.67 | 5.93 | 5.47 | 8.60 | 6.40 |
| 7B57♂ | 2.33 | 3.73 | 4.73 | 10.27 | 5.73 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 4.73 | 5.33 | 4.73 | 9.07 | 6.87 |
| 7B71♂ | 4.67 | 6.27 | 5.67 | 16.67 | 10.07 |
| 7B72♂ | 4.60 | 5.00 | 8.73 | 4.40 | 7.20 |
| 7B73♂ | 2.67 | 8.07 | 5.87 | 9.13 | 3.47 |
| 7A86♂ | 14.33 | 4.53 | 4.13 | 3.73 | 4.20 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 6.07 | 13.87 | 3.20 | 5.60 | 6.13 |
| 8B36♂ | 3.27 | 4.60 | 5.47 | 9.40 | 14.13 |
| 8B37♂ | 25.73 | 6.33 | 11.60 | 3.87 | 5.07 |
| 8B39♂ | 8.40 | 10.60 | 6.40 | 10.93 | 8.47 |
| 8B10♂ | 3.20 | 14.20 | 7.93 | 8.60 | 2.87 |
| 8B11♂ | 5.00 | 5.60 | 7.93 | 10.60 | 8.33 |
| 7B59♀ | 5.13 | 4.53 | 3.80 | 3.93 | 4.33 |
| 7B60♀ | 8.67 | 8.27 | 12.87 | 4.73 | 6.87 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 12.67 | 7.20 | 4.47 | 5.27 | 10.60 |
| 8B40♀ | 4.20 | 6.27 | 6.67 | 4.07 | 6.33 |
| 8B16♀ | 10.60 | 4.07 | 28.07 | 3.73 | 9.53 |
| 8B17♀ | 2.67 | 5.80 | 10.00 | 6.60 | 43.93 |
| 8B18♀ | 11.47 | 8.00 | 5.67 | 11.33 | 5.00 |
| 8B19♀ | 10.13 | 16.20 | 9.73 | 2.67 | 2.33 |
| 8B114♀ | 4.87 | 5.27 | 10.40 | 3.00 | 8.60 |
| 8B115♀ | 12.13 | 10.00 | 11.13 | 11.27 | 3.67 |
| 8B116♀ | 7.67 | 3.40 | 3.53 | 2.67 | 7.20 |
| 8A38♀ | 6.27 | 3.27 | 6.20 | 3.60 | 3.20 |
| 9B130♀ | 8.07 | 4.20 | 3.80 | 9.67 | 9.00 |
| Average | 6.919 | 6.363 | 6.951 | 6.458 | 7.329 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 5.40 | 6.67 | 8.27 | 6.00 | 5.40 |
| 7B57♂ | 4.33 | 4.93 | 3.40 | 4.40 | 4.67 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 11.27 | 2.87 | 7.53 | 4.80 | 3.60 |
| 7B71♂ | 29.40 | 8.13 | 5.93 | 3.27 | 4.00 |
| 7B72♂ | 6.73 | 5.00 | 3.33 | 4.27 | 11.53 |
| 7B73♂ | 3.33 | 3.60 | 3.80 | 3.27 | 4.87 |
| 7A86♂ | 2.53 | 2.67 | 3.00 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 4.13 | 14.40 | 10.53 | 6.87 | 6.73 |
| 8B36♂ | 6.60 | 8.20 | 15.27 | 4.87 | 5.47 |
| 8B37♂ | 5.07 | 7.20 | 4.67 | 5.20 | 13.07 |
| 8B39♂ | 5.07 | 6.40 | 9.93 | 5.47 | 9.07 |
| 8B10♂ | 5.07 | 7.60 | 11.67 | 6.93 | 7.40 |
| 8B11♂ | 4.13 | 16.33 | 7.20 | 13.00 | 2.47 |
| 7B59♀ | 4.80 | 8.07 | 14.80 | 4.93 | 8.60 |
| 7B60♀ | 7.20 | 11.53 | 11.20 | 4.27 | 6.13 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 4.60 | 6.33 | 5.00 | 3.73 | 4.53 |
| 8B40♀ | 5.33 | 7.80 | 6.93 | 6.47 | 647.20 |
| 8B16♀ | 4.00 | 4.73 | 3.20 | 10.47 | 4.13 |
| 8B17♀ | 13.80 | 4.33 | 5.47 | 8.20 | 10.13 |
| 8B18♀ | 5.27 | 9.13 | 11.00 | 11.27 | 27.53 |
| 8B19♀ | 4.07 | 5.20 | 6.20 | 8.60 | 4.47 |
| 8B114♀ | 2.67 | 2.27 | 6.53 | 3.00 | 5.93 |
| 8B115♀ | 3.07 | 3.07 | 3.13 | 4.53 | 6.27 |
| 8B116♀ | 3.80 | 9.13 | 5.53 | 5.33 | 3.87 |
| 8A38♀ | 3.40 | 7.07 | 3.87 | 4.80 | 3.93 |
| 9B130♀ | 5.80 | 4.87 | 11.07 | 7.80 | 10.00 |
| Average | 5.674 | 6.262 | 6.627 | 5.514 | 27.802 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 6.87 | 3.07 | 7.33 | 9.80 | 8.00 |
| 7B57♂ | 5.00 | 3.87 | 3.67 | 4.67 | 4.47 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 5.87 | 22.73 | 5.67 | 2.33 | 4.60 |
| 7B71♂ | 3.33 | 3.20 | 4.33 | 3.60 | 6.87 |
| 7B72♂ | 4.60 | 4.13 | 4.13 | 4.33 | 3.47 |
| 7B73♂ | 2.13 | 4.33 | 2.47 | 3.73 | 3.47 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 5.27 | 11.67 | 5.87 | 8.47 | 6.00 |
| 8B36♂ | 6.20 | 3.07 | 2.67 | 5.13 | 7.13 |
| 8B37♂ | 22.60 | 12.80 | 8.53 | 11.13 | 3.93 |
| 8B39♂ | 4.40 | 7.53 | 11.30 | 2.87 | 5.87 |
| 8B10♂ | 10.40 | 7.47 | 14.47 | 5.87 | 23.00 |
| 8B11♂ | 8.00 | 6.47 | 13.27 | 14.33 | 7.87 |
| 7B59♀ | 3.27 | 2.93 | 7.33 | 1.93 | 4.47 |
| 7B60♀ | 6.87 | 8.73 | 7.93 | 5.07 | 6.67 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 5.00 | 10.53 | 9.20 | 5.93 | 6.80 |
| 8B40♀ | 7.80 | 5.40 | 6.80 | 7.93 | 5.87 |
| 8B16♀ | 11.67 | 6.60 | 2.67 | 34.47 | 14.60 |
| 8B17♀ | 52.67 | 8.80 | 6.67 | 9.00 | 5.67 |
| 8B18♀ | 6.20 | 17.73 | 19.53 | 8.67 | 7.13 |
| 8B19♀ | 3.33 | 6.00 | 2.93 | 3.67 | 3.60 |
| 9B114♀ | 4.20 | 2.60 | 3.40 | 9.20 | 4.47 |
| 8B115♀ | 4.47 | 10.53 | 9.13 | 7.73 | 6.33 |
| 8B116♀ | 5.13 | 7.27 | 6.67 | 6.80 | 6.27 |
| 8A38♀ | 9.93 | 3.27 | 6.27 | 3.53 | 26.73 |
| 9B130♀ | 4.93 | 7.40 | 7.27 | 10.00 | 6.07 |
| Average | 7.440 | 6.707 | 6.416 | 6.775 | 6.957 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 3.07 | 6.73 | 5.20 | 7.00 | 5.20 |
| 7B57♂ | 4.13 | 4.27 | 3.40 | 4.33 | 3.13 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 2.80 | 7.00 | 7.27 | 4.80 | 5.47 |
| 7B71♂ | 8.53 | 2.27 | 4.67 | 5.67 | 9.27 |
| 7B72♂ | 5.27 | 5.27 | 4.80 | 4.00 | 4.07 |
| 7B73♂ | 8.07 | 2.20 | 3.27 | 6.07 | 7.67 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 4.67 | 6.20 | 4.47 | 9.20 | 3.07 |
| 8B36♂ | 5.60 | 5.27 | 2.40 | 3.67 | 3.73 |
| 8B37♂ | 5.60 | 4.47 | 5.40 | 6.87 | 5.13 |
| 8B39♂ | 4.27 | 6.00 | 6.00 | 4.67 | 4.93 |
| 8B19♂ | 7.27 | 10.60 | 6.13 | 9.27 | 9.93 |
| 8B11♂ | 6.73 | 6.80 | 11.33 | 5.13 | 11.47 |
| 7B59♀ | 6.27 | 3.20 | 5.87 | 5.33 | 4.33 |
| 7B60♀ | 3.53 | 5.67 | 5.73 | 4.33 | 8.53 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 7.80 | 2.93 | 5.13 | 3.20 | 4.60 |
| 8B40♀ | 6.00 | 3.53 | 4.20 | 4.87 | 4.33 |
| 8B16♀ | 9.40 | 18.60 | 3.60 | 3.80 | 1.93 |
| 8B17♀ | 11.00 | 8.40 | 14.27 | 18.60 | 2.93 |
| 8B18♀ | 36.60 | 7.67 | 19.40 | 5.07 | 8.33 |
| 8B19♀ | 16.93 | 2.60 | 4.33 | 2.87 | 7.27 |
| 8B114♀ | 6.67 | 2.60 | 4.00 | 4.27 | 9.67 |
| 8B115♀ | 14.33 | 7.47 | 14.33 | 7.00 | 6.47 |
| 8B116♀ | 2.40 | 8.00 | 3.13 | 11.93 | 5.53 |
| 8A38♀ | 6.80 | 5.67 | 2.20 | 4.07 | 5.60 |
| 9B130♀ | 2.80 | 3.53 | 7.07 | 5.27 | 3.00 |
| Average | 6.957 | 5.334 | 5.689 | 5.479 | 5.289 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 4.93 | 3.93 | 3.33 | 6.20 | 3.40 |
| 7B57♂ | 3.07 | 5.27 | 4.27 | 5.87 | 7.00 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 5.87 | 4.93 | 2.33 | 4.13 | 5.13 |
| 7B71♂ | 6.47 | 7.40 | 10.67 | 7.47 | 5.27 |
| 7B72♂ | 4.33 | 5.87 | 7.67 | 5.00 | 3.87 |
| 7B73♂ | 4.47 | 4.53 | 5.07 | 5.87 | 4.40 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A67♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 2.73 | 3.20 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 7.13 | 4.87 | 6.73 | 3.13 | 3.07 |
| 8B37♂ | 4.87 | 6.07 | 2.80 | 4.60 | 5.27 |
| 8B39♂ | 3.00 | 2.67 | 6.87 | 3.93 | 4.27 |
| 8B10♂ | 6.87 | 7.00 | 5.40 | 7.60 | 7.60 |
| 8B11♂ | 5.47 | 9.73 | 7.67 | 4.67 | 4.27 |
| 7B59♀ | 4.80 | 9.53 | 8.53 | 5.33 | 3.33 |
| 7B60♀ | 10.13 | 5.53 | 2.93 | 5.93 | 3.87 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 10.13 | 3.67 | 5.07 | 3.20 | 3.67 |
| 8B40♀ | 4.53 | 9.93 | 4.13 | 7.13 | 11.00 |
| 8B16♀ | 2.60 | 3.00 | 7.87 | 2.47 | 2.60 |
| 8B17♀ | 2.27 | 4.13 | 3.53 | 3.07 | 2.53 |
| 8E18♀ | 3.40 | 2.27 | 12.93 | 4.27 | 5.67 |
| 8E19♀ | 3.07 | 2.07 | 3.93 | 3.67 | 2.60 |
| 8B114♀ | 7.27 | 8.53 | 4.20 | 11.20 | 6.71 |
| 8B115♀ | 10.80 | 7.53 | 5.27 | 7.80 | 12.47 |
| 8B116♀ | 6.60 | 6.60 | 7.53 | 5.73 | 5.20 |
| 8A38♀ | 5.27 | 3.20 | 3.33 | 3.20 | 4.33 |
| 9E130♀ | 3.60 | 3.60 | 4.67 | 5.33 | 3.00 |
| Average | 4.898 | 4.938 | 5.093 | 4.762 | 4.553 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 5.47 | 4.60 | 5.87 | 3.13 | 12.27 |
| 7B57♂ | 4.13 | 6.27 | 4.93 | 4.80 | 4.00 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B59♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 3.13 | 3.47 | 3.87 | 7.07 | 5.27 |
| 7B71♂ | 4.13 | 7.27 | 3.00 | 2.40 | 5.20 |
| 7B72♂ | 4.13 | 5.00 | 4.67 | 6.07 | 4.73 |
| 7B73♂ | 3.60 | 3.13 | 2.20 | 3.40 | 2.20 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 3.07 | 3.87 | 3.40 | 3.60 | 6.00 |
| 8B37♂ | 3.67 | 5.53 | 4.60 | 3.60 | 7.47 |
| 8B39♂ | 5.60 | 3.00 | 3.60 | 3.47 | 6.40 |
| 8B10♂ | 5.87 | 4.27 | 4.73 | 6.73 | 3.67 |
| 8B11♂ | 3.07 | 7.07 | 2.60 | 6.27 | 3.73 |
| 7B59♀ | 3.73 | 5.87 | 2.20 | 2.80 | 4.27 |
| 7B60♀ | 3.80 | 6.73 | 7.73 | 8.53 | 7.27 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 3.33 | 3.40 | 4.00 | 3.73 | 2.87 |
| 8B40♀ | 6.00 | 19.47 | 7.87 | 6.07 | 7.13 |
| 8B16♀ | 2.73 | 6.13 | 2.27 | 4.00 | 3.53 |
| 8B17♀ | 3.53 | 7.53 | 6.47 | 22.87 | 4.13 |
| 8B18♀ | 6.60 | 6.27 | 4.73 | 7.40 | 11.60 |
| 8B19♀ | 2.60 | 3.60 | 3.07 | 3.07 | 5.33 |
| 8B114♀ | 3.47 | 5.80 | 4.00 | 9.00 | 11.13 |
| 8B115♀ | 10.27 | 6.20 | 4.73 | 7.67 | 4.47 |
| 8B116♀ | 4.93 | 5.27 | 2.73 | 2.33 | 4.07 |
| 8A38♀ | 4.87 | 3.73 | 3.67 | 2.53 | 5.73 |
| 9B130♀ | 2.53 | 2.73 | 1.93 | 3.13 | 4.60 |
| Average | 4.011 | 5.076 | 3.831 | 4.991 | 5.105 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 6.60 | 5.40 | 6.40 | 7.47 | 4.87 |
| 7B57♂ | 5.40 | 4.47 | 5.80 | 3.80 | 6.00 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 4.47 | 4.53 | 6.87 | 3.20 | 1.93 |
| 7B71♂ | 3.20 | 4.53 | 7.53 | 12.80 | 7.00 |
| 7B72♂ | 9.00 | 2.67 | 5.60 | 5.53 | 3.00 |
| 7B73♂ | 4.67 | 3.37 | 2.67 | 2.33 | 2.27 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.13 | 2.53 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 5.07 | 6.60 | 6.53 | 5.80 | 7.40 |
| 8B39♂ | 4.13 | 7.00 | 8.67 | 4.40 | 4.40 |
| 8B10♂ | 10.60 | 5.87 | 3.93 | 9.07 | 3.87 |
| 8B11♂ | 4.13 | 3.73 | 4.13 | 3.47 | 4.73 |
| 7B59♀ | 4.40 | 3.20 | 5.07 | 13.93 | 4.93 |
| 7B60♀ | 7.53 | 6.53 | 4.40 | 6.53 | 5.47 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 3.00 | 2.73 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 10.40 | 7.87 | 7.73 | 10.00 | 5.40 |
| 8B16♀ | 1.93 | 7.93 | 3.53 | 5.33 | 6.73 |
| 8B17♀ | 2.87 | 2.27 | 4.93 | 2.13 | 3.00 |
| 8B18♀ | 4.60 | 8.13 | 11.67 | 5.60 | 4.73 |
| 8B19♀ | 3.00 | 3.60 | 3.07 | 2.67 | 7.80 |
| 8B114♀ | 12.07 | 3.33 | 4.53 | 7.33 | 4.87 |
| 8B115♀ | 6.93 | 6.73 | 8.67 | 6.33 | 5.80 |
| 8B116♀ | 2.80 | 3.73 | 2.47 | 2.40 | 3.07 |
| 8A38♀ | 4.13 | 4.07 | 2.73 | 2.93 | 2.93 |
| 9B130♀ | 3.73 | 5.00 | 2.60 | 5.87 | 4.27 |
| Average | 4.762 | 4.408 | 4.693 | 5.006 | 4.191 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 3.33 | 3.60 | 5.87 | 3.93 | 4.53 |
| 7B57♂ | 3.33 | 7.93 | 6.53 | 4.47 | 8.73 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 3.07 | 4.00 | 4.87 | 4.87 | 4.87 |
| 7B71♂ | 4.53 | 3.73 | 3.73 | 4.87 | 6.53 |
| 7B72♂ | 3.67 | 3.40 | 3.93 | 4.67 | 3.80 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 4.07 | 3.27 | 3.20 | 4.93 | 2.40 |
| 8B39♂ | 4.47 | 5.73 | 2.07 | 4.73 | 2.47 |
| 8B10♂ | 3.67 | 2.80 | 5.67 | 3.67 | 2.53 |
| 8B11♂ | 3.93 | 3.93 | 3.53 | 4.07 | 5.33 |
| 7B59♀ | 4.60 | 3.27 | 14.73 | 40.53 | 13.53 |
| 7B60♀ | 4.87 | 6.47 | 5.07 | 35.60 | 3.20 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 7.47 | 5.87 | 53.87 | 9.40 | 31.67 |
| 8B16♀ | 5.47 | 5.20 | 3.73 | 4.47 | 2.87 |
| 8B17♀ | 3.80 | 3.27 | 2.33 | 2.33 | 2.07 |
| 8B18♀ | 11.87 | 5.80 | 6.60 | 6.53 | 2.40 |
| 8B19♀ | 5.73 | 3.00 | 3.53 | 2.73 | 5.40 |
| 8B114♀ | 4.47 | 4.00 | 4.53 | 4.93 | 5.73 |
| 8B115♀ | 5.73 | 7.53 | 9.07 | 7.20 | 5.60 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 2.27 | 3.00 | 4.40 | 2.33 | 3.53 |
| 9B130♀ | 5.47 | 5.33 | 3.67 | 6.00 | 6.73 |
| Average | 4.072 | 3.916 | 5.909 | 6.235 | 4.953 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 8.00 | 4.40 | 3.00 | 2.60 | 3.00 |
| 7B57♂ | 6.33 | 6.00 | 2.87 | 5.20 | 3.13 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7E70♂ | 2.00 | 4.07 | 2.53 | 2.07 | 4.87 |
| 7B71♂ | 4.67 | 6.13 | 14.27 | 3.53 | 5.07 |
| 7B72♂ | 2.80 | 4.93 | 17.40 | 2.60 | 3.47 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8E36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 3.80 | 2.87 | 3.40 | 3.13 | 3.53 |
| 8B39♂ | 3.00 | 8.33 | 4.47 | 2.20 | 4.00 |
| 8E10♂ | 3.30 | 4.93 | 4.33 | 3.53 | 6.73 |
| 8B11♂ | 2.80 | 4.33 | 4.13 | 3.53 | 5.13 |
| 7B59♀ | 14.27 | 36.20 | 5.93 | 5.00 | 5.27 |
| 7B60♀ | 5.00 | 3.20 | 3.60 | 2.73 | 3.80 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 11.33 | 5.20 | 3.53 | 3.27 | 5.40 |
| 8B16♀ | 3.13 | 2.93 | 2.93 | 3.73 | 3.13 |
| 8B17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 7.13 | 4.47 | 9.40 | 2.73 | 4.20 |
| 8B19♀ | 2.00 | 3.67 | 3.73 | 3.73 | 3.60 |
| 8B114♀ | 3.07 | 3.07 | 6.13 | 8.47 | 3.13 |
| 8B115♀ | 3.93 | 6.33 | 6.67 | 4.27 | 8.40 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 3.73 | 2.53 | 3.00 | 5.00 | 3.00 |
| 9B130♀ | 5.80 | 8.60 | 3.20 | 3.60 | 4.80 |
| Average | 4.172 | 5.026 | 4.437 | 3.317 | 3.741 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 6.00 | 3.87 | 3.73 | 4.80 | 5.13 |
| 7B57♂ | 3.27 | 3.07 | 4.20 | 7.80 | 9.13 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 3.07 | 3.87 | 3.80 | 4.20 | 1.93 |
| 7B71♂ | 3.07 | 3.87 | 4.40 | 27.27 | 5.53 |
| 7B72♂ | 2.80 | 3.93 | 4.20 | 3.07 | 13.27 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 2.60 | 2.40 | 5.07 | 3.80 | 3.13 |
| 8B39♂ | 3.67 | 2.00 | 1.93 | 2.13 | 1.02 |
| 8B10♂ | 6.13 | 5.93 | 4.20 | 3.87 | 3.60 |
| 8B11♂ | 7.40 | 4.13 | 4.67 | 9.20 | 2.27 |
| 7B59♀ | 6.33 | 10.33 | 9.87 | 4.73 | 5.53 |
| 7B60♀ | 4.07 | 3.27 | 13.20 | 4.40 | 6.60 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 3.47 | 4.73 | 7.80 | 4.47 | 4.13 |
| 8B16♀ | 1.93 | 3.07 | 2.67 | 4.87 | 5.67 |
| 8B17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 11.33 | 9.67 | 53.00 | 10.20 | 7.93 |
| 8B19♀ | 4.27 | 4.73 | 3.47 | 3.27 | 5.20 |
| 8B114♀ | 5.73 | 7.73 | 5.47 | 2.33 | 4.20 |
| 8B115♀ | 13.60 | 9.00 | 6.87 | 6.27 | 7.80 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 5.40 | 2.40 | 3.87 | 5.33 | 3.27 |
| 9B130♀ | 2.07 | 2.07 | 4.73 | 3.60 | 2.87 |
| Average | 4.160 | 3.955 | 5.858 | 4.806 | 4.260 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 6.87 | 6.00 | 7.40 | 2.87 | 8.80 |
| 7B57♂ | 7.93 | 3.90 | 3.93 | 3.73 | 5.27 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 3.47 | 4.13 | 3.07 | 4.47 | 5.07 |
| 7B71♂ | 5.20 | 5.33 | 5.60 | 2.47 | 4.00 |
| 7B72♂ | 6.73 | 2.93 | 3.33 | 3.60 | 2.47 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 3.07 | 2.40 | 2.20 | 3.47 | 2.40 |
| 8B39♂ | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 |
| 8E10♂ | 6.87 | 3.13 | 3.07 | 4.73 | 2.33 |
| 8E11♂ | 12.07 | 6.13 | 2.27 | 2.93 | 3.80 |
| 7E59♀ | 8.20 | 5.47 | 3.73 | 6.13 | 2.53 |
| 7B60♀ | 6.47 | 6.73 | 2.40 | 3.87 | 4.80 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 3.40 | 8.27 | 3.00 | 3.27 | 3.93 |
| 8B16♀ | 3.93 | 1.80 | 2.87 | 6.53 | 2.60 |
| 8E17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 5.80 | 5.07 | 6.47 | 7.93 | 4.33 |
| 8B19♀ | 4.67 | 3.80 | 4.67 | 5.00 | 4.00 |
| 8E114♀ | 4.40 | 3.53 | 4.47 | 5.67 | 6.00 |
| 8B115♀ | 6.80 | 8.87 | 8.87 | 7.33 | 9.67 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 3.20 | 2.20 | 3.40 | 3.47 | 2.47 |
| 9B130♀ | 1.80 | 5.87 | 2.47 | 3.33 | 4.40 |
| Average | 4.383 | 3.869 | 3.461 | 3.713 | 3.649 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 8.27 | 5.40 | 7.60 | 3.27 | 3.13 |
| 7B57♂ | 4.40 | 4.27 | 3.13 | 2.60 | 3.07 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 3.47 | 3.93 | 2.67 | 2.47 | 2.33 |
| 7B71♂ | 3.37 | 3.20 | 3.13 | 3.40 | 2.93 |
| 7B72♂ | 5.60 | 3.33 | 5.93 | 3.20 | 4.47 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 3.33 | 4.87 | 3.40 | 3.47 | 2.80 |
| 8B39♂ | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 |
| 8B10♂ | 4.00 | 2.53 | 2.40 | 2.07 | 2.33 |
| 8B11♂ | 3.80 | 4.67 | 4.13 | 2.80 | 3.07 |
| 7B59♀ | 4.73 | 8.40 | 5.33 | 29.67 | 14.33 |
| 7B60♀ | 5.20 | 4.13 | 12.80 | 4.60 | 2.73 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 2.67 | 3.80 | 3.00 | 2.67 | 3.93 |
| 8B16♀ | 3.73 | 3.00 | 3.13 | 4.00 | 2.60 |
| 8B17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 2.53 | 3.67 | 4.93 | 4.07 | 10.53 |
| 8B19♀ | 3.40 | 6.73 | 4.00 | 3.47 | 4.80 |
| 8B114♀ | 6.27 | 3.60 | 3.33 | 4.33 | 2.40 |
| 8B115♀ | 5.73 | 8.33 | 4.80 | 6.00 | 5.27 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 5.07 | 2.13 | 2.00 | 3.00 | 3.73 |
| 9B130♀ | 5.60 | 3.47 | 3.07 | 5.60 | 4.40 |
| Average | 3.726 | 3.669 | 3.646 | 4.043 | 3.648 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 3.87 | 2.67 | 3.40 | 3.00 | 6.00 |
| 7B57♂ | 5.87 | 4.13 | 6.13 | 4.27 | 2.47 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| 7B71♂ | 4.47 | 3.13 | 4.33 | 5.40 | 3.53 |
| 7B72♂ | 2.60 | 1.93 | 3.67 | 2.33 | 3.73 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 4.60 | 4.87 | 3.00 | 2.87 | 2.80 |
| 8E39♂ | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 |
| 8B10♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B11♂ | 2.53 | 3.73 | 3.87 | 2.60 | 4.60 |
| 7B59♀ | 6.20 | 7.00 | 5.67 | 5.40 | 9.00 |
| 7E60♀ | 2.73 | 2.87 | 2.78 | 2.78 | 2.78 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 4.60 | 3.73 | 2.73 | 4.33 | 8.87 |
| 8B16♀ | 2.47 | 3.33 | 6.40 | 4.20 | 3.27 |
| 8B17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 6.07 | 4.87 | 4.20 | 8.27 | 5.80 |
| 8B19♀ | 2.53 | 9.87 | 7.47 | 3.60 | 3.87 |
| 8B114♀ | 3.27 | 4.40 | 4.27 | 3.93 | 2.80 |
| 8B115♀ | 5.53 | 4.20 | 5.93 | 6.53 | 4.33 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 2.73 | 1.80 | 4.07 | 2.07 | 2.20 |
| 9B130♀ | 5.07 | 5.40 | 3.40 | 2.67 | 2.67 |
| Average | 3.359 | 3.465 | 3.558 | 3.322 | 3.471 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 3.40 | 3.60 | 5.73 | 6.13 | 3.40 |
| 7B57♂ | 7.00 | 4.20 | 3.40 | 7.33 | 7.20 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| 7B71♂ | 4.73 | 3.67 | 5.07 | 3.60 | 3.53 |
| 7B72♂ | 2.60 | 3.53 | 2.80 | 3.53 | 2.33 |
| 7B73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 5.47 | 3.67 | 3.53 | 3.40 | 2.60 |
| 8B39♂ | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 |
| 8B10♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B11♂ | 7.27 | 3.33 | 8.00 | 7.73 | 10.13 |
| 7B59♀ | 4.40 | 3.93 | 3.53 | 3.20 | 14.47 |
| 7B60♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 4.33 | 4.60 | 4.80 | 5.33 | 6.33 |
| 8B16♀ | 3.73 | 3.00 | 7.73 | 2.13 | 4.73 |
| 8B17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 6.00 | 4.40 | 3.20 | 4.93 | 3.60 |
| 8B19♀ | 6.93 | 10.53 | 6.07 | 2.67 | 2.60 |
| 8B114♀ | 3.73 | 2.33 | 2.80 | 3.80 | 2.60 |
| 8B115♀ | 6.60 | 6.27 | 7.80 | 9.93 | 12.80 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 3.07 | 2.45 | 2.45 | 2.45 | 2.45 |
| 9B130♀ | 4.40 | 3.93 | 5.47 | 4.80 | 6.13 |
| Average | 3.729 | 3.388 | 3.686 | 3.639 | 4.170 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | 2.60 | 3.80 | 2.33 | 3.53 | 2.80 |
| 7B57♂ | 4.73 | 3.33 | 8.33 | 2.47 | 2.40 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| 7B71♂ | 7.80 | 4.53 | 5.80 | 4.73 | 3.47 |
| 7E72♂ | 2.60 | 3.60 | 4.00 | 3.80 | 2.87 |
| 7E73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8E37♂ | 2.33 | 3.00 | 7.13 | 5.40 | 3.27 |
| 8E39♂ | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 |
| 8E10♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B11♂ | 7.00 | 2.80 | 3.53 | 5.60 | 2.80 |
| 7E59♀ | 3.80 | 5.47 | 2.00 | 2.53 | 2.00 |
| 7E60♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 4.60 | 5.67 | 6.67 | 5.13 | 3.33 |
| 8E16♀ | 2.47 | 5.87 | 8.60 | 3.00 | 3.07 |
| 8E17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8E18♀ | 4.80 | 4.67 | 9.00 | 5.93 | 18.73 |
| 8E19♀ | 6.33 | 4.40 | 5.67 | 3.00 | 3.53 |
| 8E114♀ | 4.80 | 4.07 | 4.20 | 2.73 | 3.07 |
| 8E115♀ | 6.53 | 6.13 | 12.40 | 9.47 | 7.00 |
| 8E116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 2.45 | 2.45 | 2.45 | 2.45 | 2.45 |
| 9E130♀ | 4.00 | 3.80 | 3.40 | 5.93 | 4.73 |
| Average | 3.501 | 3.393 | 4.124 | 3.463 | 3.457 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|---------|--------|--------|--------|--------|---------|
| 7B56♂ | 2.27 | 2.60 | 4.33 | 5.33 | 2.60 |
| 7E57♂ | 3.60 | 2.67 | 6.33 | 4.47 | 3.13 |
| 7B58♂ | 2.09 | 2.09 | 2.09 | 2.09 | 2.09 |
| 7B69♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| 7B70♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| 7B71♂ | 3.87 | 2.87 | 4.00 | 4.93 | 9.13 |
| 7B72♂ | 2.33 | 2.80 | 2.90 | 4.47 | 2.33 |
| 7E73♂ | 2.42 | 2.42 | 2.42 | 2.42 | 2.42 |
| 7A86♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A87♂ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| 7A88♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 8B36♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B37♂ | 3.20 | 6.87 | 1.93 | 2.20 | 8.40 |
| 8B39♂ | 2.02 | 2.02 | 2.02 | 2.02 | 2.02 |
| 8B10♂ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8B11♂ | 3.47 | 6.20 | 2.73 | 1.93 | 1.80 |
| 7E59♀ | 2.18 | 2.18 | 2.18 | 2.18 | 2.18 |
| 7B60♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A91♀ | 2.78 | 2.78 | 2.78 | 2.78 | 2.78 |
| 7A92♀ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| 8B40♀ | 4.87 | 5.40 | 5.20 | 4.33 | 7.40 |
| 8B16♀ | 4.27 | 3.00 | 1.80 | 2.47 | 2.13 |
| 8B17♀ | 2.24 | 2.24 | 2.24 | 2.24 | 2.24 |
| 8B18♀ | 4.47 | 12.73 | 4.27 | 3.87 | 6.00 |
| 8B19♀ | 2.27 | 1.87 | 6.07 | 2.53 | 5.60 |
| 8B114♀ | 2.47 | 2.76 | 2.76 | 2.76 | 2.76 |
| 8B115♀ | 7.13 | 7.87 | 17.20 | 5.07 | 6.73 |
| 8B116♀ | 2.65 | 2.65 | 2.65 | 2.65 | 2.65 |
| 8A38♀ | 2.45 | 2.45 | 2.45 | 2.45 | 2.45 |
| 9B130♀ | 2.93 | 3.33 | 5.87 | 2.27 | 4.47 |
| Average | 2.999 | 3.460 | 3.604 | 2.982 | 3.510 |

Table IXa. Inclined Plane Learning by
Inbred Rats.

| Rat # | Failed to learn. | Days required to learn. |
|--------|---------------------|----------------------------|
| 7B56♂ | 1 | 100+ |
| 7E57♂ | 1 | 100+ |
| 7B58♂ | | 20 |
| 7B69♂ | | 12 |
| 7B70♂ | | 20 |
| 7E71♂ | 1 | 100+ |
| 7B72♂ | 1 | 100+ |
| 7E73♂ | | 55 |
| 7A86♂ | | 28 |
| 7A87♂ | | 16 |
| 7A88♂ | | 42 |
| 8B36♂ | | 53 |
| 8B37♂ | 1 | 100+ |
| 8B39♂ | | 69 |
| 8B10♂ | | 79 |
| 8E11♂ | 1 | 100+ |
| 7B59♀ | | 95 |
| 7B60♀ | | 82 |
| 7A91♀ | | 12 |
| 7A92♀ | | 52 |
| 8B40♀ | 1 | 100+ |
| 8E16♀ | | 100 |
| 8B17♀ | | 60 |
| 8B18♀ | 1 | 100+ |
| 8E19♀ | 1 | 100+ |
| 8E114♀ | | 96 |
| 8B115♀ | 1 | 100+ |
| 8E116♀ | | 55 |
| 8A38♀ | | 86 |
| 9E130♀ | 1 | 100+ |
| Total | 11 | : Average 73.70+ |

Table IXa. Inclined Plane Learning by
Inbred Rats.



| Rat # | First trial after 60 days' rest. |
|---------|-------------------------------------|
| ----- | |
| 7E56♂ | ----- |
| 7E57♂ | ----- |
| 7E58♂ | 12.00 |
| 7E69♂ | 36.20 |
| 7E70♂ | 240.20 |
| 7E71♂ | ----- |
| 7E72♂ | ----- |
| 7E73♂ | 20.20 |
| 7A86♂ | 49.80 |
| 7A87♂ | 52.20 |
| 7A88♂ | 2.80 |
| 8E36♂ | 31.20 |
| 8E37♂ | ----- |
| 8E39♂ | 17.40 |
| 8E10♂ | 25.60 |
| 8E11♂ | ----- |
| 7E59♀ | 18.00 |
| 7E60♀ | 26.40 |
| 7A91♀ | 28.40 |
| 7A92♀ | 8.20 |
| 8E40♀ | ----- |
| 8E16♀ | 6.00 |
| 8E17♀ | 6.20 |
| 8E18♀ | ----- |
| 8E19♀ | ----- |
| 8E114♀ | 10.60 |
| 8E115♀ | ----- |
| 8E116♀ | 6.80 |
| 8A38♀ | 6.80 |
| 9E130♀ | ----- |
| ----- | |
| Average | 31.842 |
| ----- | |

Table IXb. Absolute Retention of Inbred Rats.
Inclined Plane.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---------|--------|-------|-------|-------|-------|
| 7E56♂ | ----- | ----- | ----- | ----- | ----- |
| 7B57♂ | ----- | ----- | ----- | ----- | ----- |
| 7E58♂ | 9.67 | 6.93 | 5.73 | 10.60 | 11.07 |
| 7B69♂ | 88.07 | 33.20 | 11.07 | 9.87 | 24.13 |
| 7E70♂ | 209.87 | 8.40 | 2.47 | 2.47 | 2.47 |
| 7E71♂ | ----- | ----- | ----- | ----- | ----- |
| 7E72♂ | ----- | ----- | ----- | ----- | ----- |
| 7E73♂ | 73.13 | 6.73 | 16.20 | 16.00 | 5.53 |
| 7A66♂ | 266.33 | 7.13 | 3.00 | 3.00 | 3.00 |
| 7A87♂ | 27.13 | 11.27 | 5.20 | 4.67 | 5.67 |
| 7A88♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 8B36♂ | 13.73 | 12.67 | 4.93 | 2.80 | 5.07 |
| 8B37♂ | ----- | ----- | ----- | ----- | ----- |
| 8E39♂ | 7.47 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B10♂ | 11.53 | 3.87 | 6.47 | 6.53 | 6.73 |
| 8B11♂ | ----- | ----- | ----- | ----- | ----- |
| 7E59♀ | 8.13 | 4.20 | 11.07 | 2.53 | 2.53 |
| 8B60♀ | 20.20 | 9.13 | 3.40 | 2.73 | 2.73 |
| 7A91♀ | 15.87 | 7.93 | 5.40 | 4.80 | 5.80 |
| 7A92♀ | 8.67 | 4.53 | 3.53 | 4.20 | 3.67 |
| 8B40♀ | ----- | ----- | ----- | ----- | ----- |
| 8B16♀ | 4.93 | 3.33 | 1.93 | 1.93 | 1.93 |
| 8B17♀ | 7.53 | 3.47 | 5.00 | 4.67 | 3.20 |
| 8B18♀ | ----- | ----- | ----- | ----- | ----- |
| 8B19♀ | ----- | ----- | ----- | ----- | ----- |
| 8E114♀ | 10.07 | 5.71 | 6.47 | 3.07 | 3.07 |
| 8B115♀ | ----- | ----- | ----- | ----- | ----- |
| 8B116♀ | 4.53 | 2.87 | 4.07 | 3.67 | 2.33 |
| 8A38♀ | 4.67 | 2.27 | 2.27 | 2.27 | 2.27 |
| 9B130♀ | ----- | ----- | ----- | ----- | ----- |
| Average | 41.789 | 7.301 | 5.436 | 4.783 | 5.067 |

Table IXc. Inclined Plane Relearning by
Inbred Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|---------|-------|-------|-------|-------|--------|
| ----- | | | | | |
| 7E56♂ | ----- | ----- | ----- | ----- | ----- |
| 7E57♂ | ----- | ----- | ----- | ----- | ----- |
| 7E58♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| 7E69♂ | 24.87 | 12.40 | 11.47 | 9.27 | 2.80 |
| 7E70♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 7E71♂ | ----- | ----- | ----- | ----- | ----- |
| 7E72♂ | ----- | ----- | ----- | ----- | ----- |
| 7E73♂ | 10.93 | 6.27 | 4.13 | 3.07 | 3.60 |
| 7A86♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 7A87♂ | 7.40 | 6.53 | 6.47 | 5.33 | 6.60 |
| 7A88♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 8B36♂ | 7.13 | 5.47 | 2.73 | 2.73 | 2.73 |
| 8B37♂ | ----- | ----- | ----- | ----- | ----- |
| 8B39♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B10♂ | 5.53 | 8.80 | 2.60 | 2.60 | 2.60 |
| 8E11♂ | ----- | ----- | ----- | ----- | ----- |
| 7E59♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| 7E60♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A91♀ | 6.33 | 2.60 | 2.60 | 2.60 | 2.60 |
| 7A92♀ | 4.47 | 6.07 | 5.20 | 5.47 | 3.33 |
| 8B40♀ | ----- | ----- | ----- | ----- | ----- |
| 8E16♀ | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 |
| 8E17♀ | 4.20 | 4.93 | 2.00 | 2.00 | 2.00 |
| 8E18♀ | ----- | ----- | ----- | ----- | ----- |
| 8E19♀ | ----- | ----- | ----- | ----- | ----- |
| 8E114♀ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| 8E115♀ | ----- | ----- | ----- | ----- | ----- |
| 8E116♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8A38♀ | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 |
| 9E130♀ | ----- | ----- | ----- | ----- | ----- |
| ----- | | | | | |
| Average | 5.175 | 4.239 | 3.404 | 3.186 | 2.828 |
| ----- | | | | | |

Table IXc. Inclined Plane Relearning by
Inbred Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|---------|--------|--------|--------|--------|--------|
| 7B56♂ | ----- | ----- | ----- | ----- | ----- |
| 7B57♂ | ----- | ----- | ----- | ----- | ----- |
| 7B58♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| 7B69♂ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| 7B70♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 7B71♂ | ----- | ----- | ----- | ----- | ----- |
| 7B72♂ | ----- | ----- | ----- | ----- | ----- |
| 7B73♂ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| 7A86♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 7A87♂ | 3.93 | 4.27 | 4.93 | 4.93 | 7.47 |
| 7A88♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 8B36♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 8B37♂ | ----- | ----- | ----- | ----- | ----- |
| 8B39♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B10♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B11♂ | ----- | ----- | ----- | ----- | ----- |
| 7B59♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| 7B60♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A91♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 7A92♀ | 19.60 | 4.13 | 5.07 | 6.00 | 2.73 |
| 8B40♀ | ----- | ----- | ----- | ----- | ----- |
| 8B16♀ | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 |
| 8B17♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| 8B18♀ | ----- | ----- | ----- | ----- | ----- |
| 8B19♀ | ----- | ----- | ----- | ----- | ----- |
| 8B114♀ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| 8B115♀ | ----- | ----- | ----- | ----- | ----- |
| 8B116♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8A38♀ | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 |
| 9B130♀ | ----- | ----- | ----- | ----- | ----- |
| Average | 3.508 | 2.712 | 2.796 | 2.845 | 2.807 |

Table IXc. Inclined Plane Learning by
Inbred Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|---------|--------|--------|--------|--------|--------|
| ----- | | | | | |
| 7B56♂ | ---- | ---- | ---- | ---- | ---- |
| 7B57♂ | ---- | ---- | ---- | ---- | ---- |
| 7B58♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| 7B59♂ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| 7B70♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 7B71♂ | ---- | ---- | ---- | ---- | ---- |
| 7B72♂ | ---- | ---- | ---- | ---- | ---- |
| 7B73♂ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| 7A86♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 7A87♂ | 3.73 | 3.60 | 3.47 | 6.07 | 5.00 |
| 7A88♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 8B36♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 8B37♂ | ---- | ---- | ---- | ---- | ---- |
| 8B39♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B10♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B11♂ | ---- | ---- | ---- | ---- | ---- |
| 7B59♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| 7B60♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A91♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 7A92♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 8B40♀ | ---- | ---- | ---- | ---- | ---- |
| 8B16♀ | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 |
| 8B17♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| 8B18♀ | ---- | ---- | ---- | ---- | ---- |
| 8B19♀ | ---- | ---- | ---- | ---- | ---- |
| 8B114♀ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| 8B115♀ | ---- | ---- | ---- | ---- | ---- |
| 8B116♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8A38♀ | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 |
| 9B130♀ | ---- | ---- | ---- | ---- | ---- |
| ----- | | | | | |
| Average | 2.610 | 2.603 | 2.596 | 2.733 | 2.677 |
| ----- | | | | | |

Table IXc. Inclined Plane Relearning by
Inbred Rats.

| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 to 50 |
|---------|--------|--------|--------|--------|--------------|
| 7B56♂ | ----- | ----- | ----- | ----- | ----- |
| 7B57♂ | ----- | ----- | ----- | ----- | ----- |
| 7B58♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| 7B69♂ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| 7B70♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 7B71♂ | ----- | ----- | ----- | ----- | ----- |
| 7B72♂ | ----- | ----- | ----- | ----- | ----- |
| 7B73♂ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| 7A66♂ | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| 7A87♂ | 3.67 | 6.00 | 3.47 | 2.67 | 2.67 |
| 7A88♂ | 2.47 | 2.47 | 2.47 | 2.47 | 2.47 |
| 8B36♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 8B37♂ | ----- | ----- | ----- | ----- | ----- |
| 8B39♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B10♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 8B11♂ | ----- | ----- | ----- | ----- | ----- |
| 7B59♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| 7B60♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 7A91♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| 7A92♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| 8B40♀ | ----- | ----- | ----- | ----- | ----- |
| 8B16♀ | 1.93 | 1.93 | 1.93 | 1.93 | 1.93 |
| 8B17♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| 8B18♀ | ----- | ----- | ----- | ----- | ----- |
| 8B19♀ | ----- | ----- | ----- | ----- | ----- |
| 8B114♀ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| 8B115♀ | ----- | ----- | ----- | ----- | ----- |
| 8B116♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| 8A38♀ | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 |
| 9B130♀ | ----- | ----- | ----- | ----- | ----- |
| Average | 2.607 | 2.729 | 2.596 | 2.554 | 2.554 |

Table IXc. Inclined Plane Relearning by
Inbred Rats.

| Rat # | Failed to relcarn. | Days required to relcarn |
|--------|-----------------------|-----------------------------|
| 7B56♂ | | -- |
| 7B57♂ | | -- |
| 7B58♂ | | 6 |
| 7B69♂ | | 10 |
| 7B70♂ | | 3 |
| 7B71♂ | | -- |
| 7B72♂ | | -- |
| 7B73♂ | | 11 |
| 7A86♂ | | 3 |
| 7A87♂ | | 24 |
| 7A88♂ | | 1 |
| 8B36♂ | | 8 |
| 8B37♂ | | -- |
| 8B39♂ | | 2 |
| 8B10♂ | | 8 |
| 8B11♂ | | -- |
| 7B59♀ | | 4 |
| 7B60♀ | | 4 |
| 7A91♀ | | 7 |
| 7A92♀ | | 15 |
| 8B40♀ | | -- |
| 8B16♀ | | 3 |
| 8B17♀ | | 8 |
| 8B18♀ | | -- |
| 8B19♀ | | -- |
| 8B114♀ | | 4 |
| 8B115♀ | | -- |
| 8B116♀ | | 5 |
| 8A38♀ | | 2 |
| 9B130♀ | | -- |
| Total | 0 | : Average 6.74 |

Table IXc. Inclined Plane Relearning by
Inbred Rats.

| Rat # | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|---------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| 7B56♂ | 219. | 244.8 | 1.7819 | .5906 | 78.52 |
| 7B57♂ | 207. | 226.1 | 1.7418 | .5807 | 78.21 |
| 7B58♂ | 205. | 218.1 | 1.7199 | .5295 | 78.44 |
| 7B69♂ | 215. | 241.3 | 1.8771 | .5908 | 78.84 |
| 7B70♂ | 197. | 184.0 | 1.7379 | .5179 | 78.33 |
| 7B71♂ | 212. | 240.6 | 1.8172 | .5619 | 78.63 |
| 7B72♂ | 208. | 237.7 | 1.8135 | .5530 | 78.64 |
| 7B73♂ | 206. | 230.0 | 1.7880 | .5770 | 78.69 |
| 7A86♂ | 215. | 221.6 | 1.7583 | .5473 | 78.47 |
| 7A87♂ | 212. | 247.2 | 1.7497 | .5370 | 78.54 |
| 7A88♂ | 195. | 168.8 | 1.5868 | .5211 | 78.35 |
| 8B36♂ | 204. | 205.7 | 1.7666 | .5753 | 78.02 |
| 8B37♂ | 209. | 232.4 | 1.9020 | .5951 | 78.42 |
| 8B39♂ | 190. | 186.0 | 1.7305 | .5324 | 78.38 |
| 8B10♂ | 206. | 229.3 | 1.8112 | .5813 | 77.74 |
| 8B11♂ | 195. | 188.0 | 1.8329 | .5468 | 78.36 |
| 7B59♀ | 189. | 148.6 | 1.6760 | .5331 | 78.54 |
| 7B60♀ | 190. | 163.7 | 1.6802 | .5372 | 78.43 |
| 7A91♀ | 181. | 99.4* | 1.6030 | .5317 | 79.00 |
| 7A92♀ | 181. | 149.3 | 1.5989 | .4823 | 78.50 |
| 8B40♀ | 180. | 140.2 | 1.6710 | .5059 | 78.62 |
| 8B16♀ | 196. | 175.2 | 1.7477 | .5771 | 77.80 |
| 8B17♀ | 191. | 150.3 | 1.7009 | .5556 | 77.95 |
| 8B18♀ | 184. | 160.3 | 1.7144 | .5002 | 78.18 |
| 8B19♀ | 182. | 147.9 | 1.6720 | .4850 | 78.33 |
| 8B114♀ | 185. | 137.7 | 1.5945 | .4793 | 78.07 |
| 8B115♀ | 182. | 130.5 | 1.6040 | .4914 | 78.11 |
| 8B116♀ | 173. | 122.7 | 1.5606 | .4924 | 77.83 |
| 8A38♀ | 189. | 151.5 | 1.7154 | .5363 | 78.70 |
| 9B130♀ | 180. | 152.2 | 1.6711 | .4910 | 78.26 |
| Average | 195.93 | 184.37 | 1.72083 | .53787 | 78.363 |

Table IXd. Anatomical Data of Inbred Rats.

*The extremely light weight of this rat is accounted for by the fact that she was in the last stages of pneumonia when killed.

| Rat # | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|---------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| 7B56♂ | 71.32 | .81365 | .72790 | 234. |
| 7B57♂ | 71.10 | .84145 | .77037 | 234. |
| 7B58♂ | 70.77 | .83898 | .78858 | 165. |
| 7B69♂ | 72.05 | .87307 | .77791 | 297. |
| 7B70♂ | 71.37 | .88218 | .94451 | 231. |
| 7B71♂ | 70.97 | .85717 | .75528 | 231. |
| 7B72♂ | 71.10 | .87188 | .76294 | 231. |
| 7B73♂ | 72.01 | .86796 | .77739 | 231. |
| 7A86♂ | 71.79 | .81781 | .79346 | 206. |
| 7A87♂ | 71.94 | .82533 | .70781 | 206. |
| 7A88♂ | 71.00 | .81374 | .94005 | 206. |
| 8B36♂ | 71.30 | .86598 | .85882 | 206. |
| 8B37♂ | 71.45 | .91024 | .81842 | 203. |
| 8B39♂ | 72.24 | .91079 | .93038 | 206. |
| 8B10♂ | 70.36 | .87922 | .78988 | 239. |
| 8B11♂ | 71.12 | .93995 | .97495 | 191. |
| 7B59♀ | 70.98 | .88677 | 1.12786 | 234. |
| 7B60♀ | 71.63 | .88432 | 1.02639 | 231. |
| 7A91♀ | 73.89 | .98564 | 1.61268* | 206. |
| 7A92♀ | 71.62 | .88337 | 1.07093 | 206. |
| 8B40♀ | 73.00 | .92833 | 1.19187 | 209. |
| 8B16♀ | 70.27 | .89168 | .99755 | 291. |
| 8B17♀ | 71.38 | .89052 | 1.13167 | 239. |
| 8B18♀ | 71.21 | .93174 | 1.06949 | 191. |
| 8B19♀ | 71.38 | .91868 | 1.13049 | 191. |
| 8B114♀ | 70.54 | .86190 | 1.15795 | 241. |
| 8B115♀ | 71.37 | .88132 | 1.22912 | 189. |
| 8B116♀ | 70.57 | .90208 | 1.27188 | 241. |
| 8A38♀ | 71.68 | .90762 | 1.13228 | 236. |
| 9B130♀ | 71.69 | .92833 | 1.09796 | 192. |
| Average | 71.437 | .87972 | .97889 | 220. |

Table IXd. Anatomical Data of Inbred Rats.

*The exceptional relative brain weight is due to the fact that when killed this rat was in the last stages of pneumonia.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------|----------|----------|---------|--------|--------|
| ----- | | | | | |
| S(H)77♂ | 981.47 | 185.33 | 95.67 | 97.27 | 17.73 |
| S(H)80♂ | 747.13 | 359.27 | 144.53 | 30.60 | 11.73 |
| S(HW)114♂ | 830.93 | 4760.80 | 107.73 | 7.20 | 12.93 |
| S(CW)126♂ | 3426.13 | 310.07 | 49.80 | 15.93 | 20.20 |
| S(HW)130♂ | 2484.07 | 1854.00 | 149.80 | 65.67 | 38.20 |
| S(HW)131♂ | 2724.53 | 1022.73 | 145.33 | 25.13 | 7.27 |
| S(HW)132♂ | 3801.80 | 1020.00 | 54.73 | 7.60 | 6.33 |
| S(HW)133♂ | 3530.47 | 913.07 | 71.87 | 29.67 | 6.40 |
| S(HW)134♂ | 2581.33 | 201.20 | 15.07 | 16.07 | 7.13 |
| S(CH)140♂ | 5504.13 | 562.40 | 487.13 | 82.53 | 30.13 |
| S(W/HC)143♂ | 2218.73 | 138.93 | 13.00 | 22.47 | 22.00 |
| S(CW)147♂ | 1922.47 | 375.73 | 64.87 | 11.80 | 57.47 |
| S(CW)148♂ | 3032.40 | 191.73 | 50.07 | 8.20 | 3.27 |
| S(CW)149♂ | 958.80 | 752.80 | 73.93 | 109.13 | 7.60 |
| S(CH)155♂ | 4387.33 | 912.00 | 52.87 | 20.87 | 15.13 |
| S(CH)156♂ | 1620.33 | 98.33 | 12.87 | 50.27 | 9.07 |
| S(C/EB)73♀ | 3043.13 | 1916.33 | 132.87 | 39.47 | 9.13 |
| S(C/EB)74♀ | 3573.40 | 1017.53 | 279.87 | 57.80 | 11.27 |
| S(H)81♀ | 220.07 | 637.33 | 586.73 | 152.80 | 18.73 |
| S(CW)128♀ | 196.73 | 1381.27 | 252.60 | 120.93 | 127.00 |
| S(CW)129♀ | 2096.80 | 1347.80 | 287.40 | 549.40 | 129.47 |
| S(CH)141♀ | 2482.27 | 299.87 | 42.87 | 14.20 | 8.67 |
| S(CH)142♀ | 3296.67 | 256.07 | 24.60 | 12.27 | 20.73 |
| S(W/HC)144♀ | 2775.33 | 576.53 | 237.07 | 102.67 | 28.53 |
| S(W/HC)145♀ | 3789.60 | 373.60 | 208.47 | 38.13 | 11.00 |
| S(W/HC)146♀ | 1431.80 | 298.93 | 24.60 | 4.87 | 11.07 |
| S(CH)157♀ | 11791.33 | 8596.67 | 64.13 | 12.20 | 8.80 |
| S(CH)159♀ | 2250.80 | 218.40 | 71.93 | 49.73 | 36.80 |
| S(CH)160♀ | 656.47 | 973.80 | 175.47 | 69.53 | 10.67 |
| S(W/HC)166♀ | 4742.13 | 129.13 | 20.73 | 23.60 | 15.40 |
| ----- | | | | | |
| Average | 2769.953 | 1072.722 | 133.287 | 61.600 | 23.995 |
| ----- | | | | | |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 33.47 | 23.40 | 31.67 | 14.07 | 8.87 |
| S(H)80♂ | 26.20 | 5.20 | 12.93 | 8.87 | 6.53 |
| S(HW)114♂ | 17.80 | 13.47 | 6.33 | 12.13 | 10.60 |
| S(CW)126♂ | 11.07 | 13.73 | 9.80 | 3.47 | 3.20 |
| S(HW)130♂ | 13.87 | 7.27 | 9.67 | 7.13 | 9.40 |
| S(HW)131♂ | 6.40 | 14.07 | 3.53 | 10.40 | 4.13 |
| S(HW)132♂ | 2.87 | 4.20 | 4.73 | 3.33 | 2.07 |
| S(HW)133♂ | 10.60 | 13.20 | 3.93 | 11.33 | 3.13 |
| S(HW)134♂ | 4.00 | 2.73 | 2.67 | 2.73 | 2.71 |
| S(CH)140♂ | 7.93 | 8.80 | 11.93 | 10.07 | 3.93 |
| S(W/HC)143♂ | 125.20 | 6.33 | 3.27 | 3.47 | 2.80 |
| S(CW)147♂ | 43.07 | 2.87 | 3.00 | 3.60 | 6.33 |
| S(CW)148♂ | 4.40 | 5.73 | 7.13 | 2.60 | 6.47 |
| S(CW)149♂ | 28.87 | 5.60 | 14.67 | 4.47 | 4.60 |
| S(CH)155♂ | 30.47 | 14.67 | 6.67 | 10.20 | 6.60 |
| S(CH)156♂ | 12.67 | 35.27 | 9.47 | 23.60 | 11.00 |
| S(C/EB)73♀ | 20.33 | 13.20 | 4.67 | 4.27 | 7.53 |
| S(C/EB)74♀ | 13.73 | 8.93 | 14.13 | 51.60 | 3.93 |
| S(H)81♀ | 12.80 | 27.20 | 9.00 | 26.40 | 10.87 |
| S(CW)128♀ | 188.20 | 21.80 | 13.60 | 6.13 | 6.73 |
| S(CW)129♀ | 10.93 | 26.53 | 20.53 | 9.07 | 6.53 |
| S(CH)141♀ | 13.33 | 11.40 | 4.93 | 9.53 | 4.00 |
| S(CH)142♀ | 11.80 | 4.53 | 14.40 | 8.73 | 8.40 |
| S(W/HC)144♀ | 18.93 | 5.67 | 3.13 | 3.33 | 6.07 |
| S(W/HC)145♀ | 27.93 | 12.80 | 59.67 | 14.80 | 5.40 |
| S(W/HC)146♀ | 11.47 | 8.47 | 8.80 | 11.20 | 3.67 |
| S(CH)157♀ | 5.00 | 8.47 | 14.87 | 28.67 | 18.67 |
| S(CH)159♀ | 45.87 | 62.20 | 27.93 | 19.93 | 20.80 |
| S(CH)160♀ | 8.60 | 4.87 | 8.87 | 6.33 | 5.60 |
| S(W/HC)166♀ | 3.40 | 11.73 | 6.20 | 6.93 | 8.27 |
| Average | 25.874 | 13.478 | 11.704 | 11.280 | 6.961 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 5.47 | 5.53 | 13.87 | 3.27 | 4.60 |
| S(H)80♂ | 6.73 | 8.27 | 9.33 | 9.13 | 9.67 |
| S(HW)114♂ | 5.67 | 1.93 | 8.07 | 6.53 | 12.27 |
| S(CW)126♂ | 3.00 | 5.80 | 2.93 | 2.80 | 11.80 |
| S(HW)130♂ | 6.60 | 4.73 | 6.20 | 3.67 | 4.00 |
| S(HW)131♂ | 8.60 | 7.73 | 6.07 | 6.00 | 7.53 |
| S(HW)132♂ | 3.20 | 5.73 | 2.20 | 2.73 | 3.53 |
| S(HW)133♂ | 2.40 | 2.00 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 17.27 | 14.27 | 4.87 | 6.07 | 2.67 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 5.73 | 7.60 | 2.47 | 2.13 | 2.27 |
| S(CW)148♂ | 7.20 | 4.47 | 3.73 | 5.40 | 3.80 |
| S(CW)149♂ | 9.40 | 7.27 | 3.33 | 6.13 | 5.60 |
| S(CH)155♂ | 7.00 | 6.33 | 4.87 | 10.13 | 3.27 |
| S(CH)156♂ | 8.53 | 10.67 | 5.60 | 7.87 | 3.20 |
| S(C/EE)73♀ | 7.33 | 8.33 | 8.13 | 9.87 | 5.87 |
| S(C/EE)74♀ | 3.07 | 6.00 | 3.47 | 5.53 | 7.07 |
| S(H)81♀ | 5.47 | 7.87 | 5.47 | 9.67 | 4.87 |
| S(CW)128♀ | 3.47 | 3.73 | 4.60 | 10.47 | 4.07 |
| S(CW)129♀ | 6.80 | 10.80 | 7.33 | 6.07 | 7.13 |
| S(CH)141♀ | 2.13 | 2.07 | 5.93 | 3.07 | 5.13 |
| S(CH)142♀ | 4.00 | 11.27 | 6.87 | 11.60 | 11.00 |
| S(W/HC)144♀ | 6.27 | 9.20 | 4.13 | 9.00 | 8.13 |
| S(W/HC)145♀ | 7.00 | 6.00 | 20.13 | 2.13 | 6.87 |
| S(W/HC)146♀ | 5.47 | 5.33 | 7.00 | 3.07 | 7.20 |
| S(CH)157♀ | 16.67 | 9.87 | 14.67 | 10.07 | 10.07 |
| S(CH)159♀ | 21.13 | 12.13 | 5.80 | 39.80 | 19.07 |
| S(CH)160♀ | 4.07 | 6.60 | 8.00 | 8.60 | 2.93 |
| S(W/HC)166♀ | 7.20 | 8.33 | 6.93 | 2.13 | 9.47 |
| Average | 6.759 | 6.858 | 6.347 | 7.045 | 6.383 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 3.13 | 4.60 | 5.80 | 10.20 | 7.87 |
| S(H)80♂ | 6.93 | 6.13 | 7.73 | 4.67 | 3.67 |
| S(HW)114♂ | 6.00 | 6.93 | 11.07 | 4.93 | 6.67 |
| S(CW)126♂ | 9.53 | 6.33 | 7.93 | 9.20 | 6.40 |
| S(HW)130♂ | 5.60 | 7.73 | 10.07 | 5.20 | 3.07 |
| S(HW)131♂ | 3.20 | 4.87 | 5.67 | 4.60 | 3.13 |
| S(HW)132♂ | 3.60 | 4.53 | 6.07 | 4.33 | 2.27 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.73 | 2.73 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 7.67 | 6.07 | 12.00 | 9.53 | 14.27 |
| S(CW)149♂ | 3.07 | 3.33 | 4.73 | 6.67 | 3.80 |
| S(CH)155♂ | 6.87 | 8.07 | 5.07 | 4.53 | 3.40 |
| S(CH)156♂ | 6.47 | 4.87 | 2.73 | 3.20 | 2.80 |
| S(C/EB)73♀ | 6.67 | 3.93 | 6.47 | 4.60 | 4.87 |
| S(C/EB)74♀ | 6.80 | 11.93 | 6.93 | 13.53 | 9.07 |
| S(H)81♀ | 4.93 | 7.27 | 10.87 | 10.67 | 9.27 |
| S(CW)128♀ | 5.33 | 4.33 | 3.20 | 3.87 | 4.13 |
| S(CW)129♀ | 5.53 | 6.00 | 8.40 | 5.47 | 8.27 |
| S(CH)141♀ | 5.60 | 3.53 | 4.87 | 3.73 | 3.67 |
| S(CH)142♀ | 7.47 | 5.13 | 6.67 | 7.80 | 4.67 |
| S(W/HC)144♀ | 3.20 | 3.53 | 6.67 | 5.67 | 6.93 |
| S(W/HC)145♀ | 11.40 | 10.93 | 5.80 | 4.80 | 5.73 |
| S(W/HC)146♀ | 2.40 | 6.40 | 5.73 | 2.13 | 2.87 |
| S(CH)157♀ | 4.47 | 3.13 | 6.53 | 2.60 | 3.87 |
| S(CH)159♀ | 4.03 | 6.07 | 7.80 | 6.47 | 11.47 |
| S(CH)160♀ | 3.27 | 8.93 | 3.93 | 3.60 | 4.20 |
| S(W/HC)166♀ | 5.47 | 4.00 | 8.60 | 5.87 | 10.80 |
| Average | 5.069 | 5.400 | 6.158 | 5.376 | 5.352 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 2.93 | 3.07 | 8.40 | 8.67 | 17.47 |
| S(H)80♂ | 4.00 | 2.33 | 9.80 | 4.73 | 8.87 |
| S(HW)114♂ | 17.40 | 2.27 | 3.13 | 3.67 | 4.93 |
| S(CW)126♂ | 8.80 | 5.73 | 5.27 | 6.00 | 3.47 |
| S(HW)130♂ | 4.87 | 9.40 | 7.60 | 9.73 | 8.53 |
| S(HW)131♂ | 2.93 | 4.93 | 9.73 | 4.47 | 6.40 |
| S(HW)132♂ | 4.07 | 2.93 | 5.07 | 2.67 | 4.00 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 7.47 | 4.20 | 6.80 | 4.27 | 1.87 |
| S(CW)149♂ | 6.80 | 5.53 | 5.20 | 6.00 | 4.00 |
| S(CH)155♂ | 4.40 | 3.93 | 17.67 | 5.73 | 5.00 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 5.27 | 6.47 | 4.93 | 5.80 | 2.67 |
| S(C/EB)74♀ | 2.13 | 4.73 | 2.33 | 9.87 | 5.13 |
| S(H)81♀ | 3.67 | 15.47 | 5.87 | 5.13 | 5.13 |
| S(CW)128♀ | 3.73 | 2.13 | 9.20 | 3.53 | 5.13 |
| S(CW)129♀ | 7.00 | 4.93 | 4.67 | 8.00 | 3.33 |
| S(CH)141♀ | 3.13 | 2.13 | 2.27 | 2.20 | 2.20 |
| S(CH)142♀ | 2.93 | 5.60 | 5.07 | 6.67 | 3.87 |
| S(W/HC)144♀ | 5.07 | 4.20 | 8.53 | 15.13 | 4.47 |
| S(W/HC)145♀ | 6.67 | 3.13 | 2.40 | 7.53 | 7.53 |
| S(W/HC)146♀ | 4.53 | 4.27 | 3.27 | 6.40 | 5.67 |
| S(CH)157♀ | 3.07 | 3.13 | 2.67 | 2.96 | 2.96 |
| S(CH)159♀ | 19.67 | 6.13 | 3.13 | 5.33 | 12.20 |
| S(CH)160♀ | 3.40 | 3.20 | 2.07 | 2.80 | 3.00 |
| S(W/HC)166♀ | 8.27 | 5.20 | 3.80 | 4.80 | 6.60 |
| Average | 5.284 | 4.378 | 5.173 | 5.280 | 5.025 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 7.07 | 6.13 | 4.80 | 4.00 | 10.20 |
| S(H)80♂ | 6.87 | 9.40 | 6.40 | 3.93 | 6.40 |
| S(HW)114♂ | 4.47 | 3.60 | 4.60 | 5.80 | 5.33 |
| S(CW)126♂ | 13.80 | 7.47 | 12.27 | 3.53 | 6.27 |
| S(HW)130♂ | 4.40 | 6.87 | 4.47 | 7.47 | 5.80 |
| S(HW)131♂ | 5.33 | 8.93 | 5.87 | 2.57 | 3.87 |
| S(HW)132♂ | 9.53 | 3.27 | 5.87 | 3.47 | 2.87 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 2.00 | 5.20 | 4.00 | 4.27 | 4.20 |
| S(CW)149♂ | 5.87 | 7.20 | 4.53 | 4.20 | 2.33 |
| S(CH)155♂ | 2.87 | 2.00 | 2.60 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EE)73♀ | 3.33 | 4.67 | 7.73 | 2.20 | 5.80 |
| S(C/EE)74♀ | 5.73 | 5.07 | 10.40 | 2.13 | 4.13 |
| S(H)81♀ | 2.93 | 11.60 | 4.40 | 14.53 | 7.80 |
| S(CW)128♀ | 8.13 | 7.47 | 5.40 | 5.87 | 3.00 |
| S(CW)129♀ | 8.87 | 11.47 | 7.27 | 2.33 | 3.20 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 3.27 | 6.87 | 3.20 | 8.40 | 5.00 |
| S(W/HC)144♀ | 5.27 | 4.67 | 10.00 | 3.53 | 6.60 |
| S(W/HC)145♀ | 2.73 | 2.93 | 2.40 | 2.69 | 2.69 |
| S(W/HC)146♀ | 4.87 | 3.73 | 8.53 | 4.40 | 6.40 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 9.87 | 2.80 | 2.87 | 2.87 | 2.85 |
| S(CH)160♀ | 6.13 | 6.67 | 4.40 | 8.53 | 4.53 |
| S(W/HC)166♀ | 4.53 | 4.67 | 14.80 | 8.27 | 5.87 |
| Average | 4.978 | 5.139 | 5.276 | 4.302 | 4.303 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 10.07 | 7.27 | 7.80 | 4.53 | 5.67 |
| S(H)80♂ | 6.27 | 6.93 | 6.00 | 6.33 | 10.60 |
| S(HW)114♂ | 4.40 | 9.93 | 3.27 | 4.07 | 2.20 |
| S(CW)126♂ | 8.13 | 8.47 | 3.07 | 2.13 | 2.53 |
| S(HW)130♂ | 4.13 | 4.47 | 2.80 | 11.40 | 3.47 |
| S(HW)131♂ | 2.33 | 3.13 | 3.40 | 2.40 | 1.80 |
| S(HW)132♂ | 3.53 | 4.80 | 3.60 | 2.53 | 2.93 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 4.13 | 4.93 | 2.73 | 3.00 | 3.27 |
| S(CW)149♂ | 4.00 | 5.33 | 3.87 | 3.67 | 5.40 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 4.47 | 10.47 | 4.93 | 3.33 | 8.13 |
| S(C/EB)74♀ | 4.87 | 4.87 | 3.60 | 3.07 | 3.07 |
| S(H)81♀ | 3.73 | 13.20 | 4.53 | 4.27 | 11.27 |
| S(CW)128♀ | 2.33 | 4.27 | 2.80 | 4.13 | 2.13 |
| S(CW)129♀ | 3.87 | 7.27 | 3.73 | 3.47 | 2.07 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 5.87 | 4.20 | 2.87 | 6.67 | 3.87 |
| S(W/HC)144♀ | 9.60 | 8.00 | 3.60 | 6.27 | 3.93 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 10.27 | 6.20 | 5.40 | 3.53 | 5.67 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 6.93 | 3.93 | 4.47 | 7.53 | 8.53 |
| S(W/HC)166♀ | 2.20 | 5.07 | 5.53 | 4.20 | 4.67 |
| Average | 4.354 | 5.075 | 3.583 | 3.868 | 4.024 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 4.47 | 6.60 | 6.53 | 9.40 | 2.80 |
| S(H)80♂ | 7.53 | 5.07 | 4.53 | 5.27 | 6.80 |
| S(HW)114♂ | 3.20 | 5.93 | 5.20 | 4.00 | 4.60 |
| S(CW)126♂ | 2.60 | 1.67 | 2.40 | 4.40 | 1.87 |
| S(HW)130♂ | 6.20 | 4.20 | 3.07 | 3.00 | 2.40 |
| S(HW)131♂ | 7.20 | 3.47 | 3.53 | 4.60 | 2.67 |
| S(HW)132♂ | 3.20 | 4.00 | 6.33 | 2.07 | 2.80 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 4.27 | 3.20 | 3.60 | 5.00 | 8.27 |
| S(CW)149♂ | 4.13 | 3.33 | 3.47 | 4.53 | 6.07 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 4.13 | 3.13 | 4.27 | 2.67 | 5.47 |
| S(C/EB)74♀ | 2.93 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 8.73 | 14.20 | 9.07 | 10.87 | 8.33 |
| S(CW)128♀ | 3.00 | 5.40 | 3.40 | 4.47 | 5.87 |
| S(CW)129♀ | 5.33 | 5.13 | 3.27 | 5.80 | 5.73 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.93 | 5.80 | 2.80 | 3.67 | 7.87 |
| S(W/HC)144♀ | 3.13 | 5.73 | 3.47 | 4.73 | 5.73 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 6.07 | 4.87 | 6.87 | 24.87 | 4.67 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)158♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 9.20 | 14.47 | 9.93 | 8.87 | 4.47 |
| S(W/HC)166♀ | 5.87 | 5.00 | 4.47 | 6.40 | 3.93 |
| Average | 4.121 | 4.457 | 3.958 | 4.905 | 4.096 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 5.07 | 6.07 | 6.13 | 2.33 | 6.73 |
| S(H)80♂ | 6.47 | 5.67 | 4.13 | 5.33 | 7.07 |
| S(HW)114♂ | 3.47 | 7.73 | 3.27 | 6.20 | 6.93 |
| S(CW)126♂ | 2.47 | 4.73 | 2.47 | 3.87 | 5.00 |
| S(HW)130♂ | 3.73 | 5.27 | 2.53 | 3.53 | 2.87 |
| S(HW)131♂ | 4.53 | 1.93 | 6.27 | 4.07 | 3.47 |
| S(HW)132♂ | 2.80 | 1.73 | 3.33 | 3.00 | 3.07 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 3.73 | 3.93 | 4.00 | 3.33 | 2.73 |
| S(CW)149♂ | 5.73 | 5.67 | 2.93 | 5.67 | 4.93 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EE)73♀ | 3.40 | 6.60 | 3.80 | 8.20 | 2.00 |
| S(C/EE)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 3.07 | 4.53 | 2.47 | 2.67 | 2.53 |
| S(CW)128♀ | 3.00 | 2.80 | 3.93 | 5.87 | 2.67 |
| S(CW)129♀ | 4.93 | 5.80 | 5.73 | 2.07 | 7.00 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 3.53 | 4.80 | 2.53 | 3.00 | 3.53 |
| S(W/HC)144♀ | 3.53 | 4.87 | 4.93 | 6.67 | 2.53 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 6.13 | 7.33 | 5.13 | 4.60 | 9.27 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 5.33 | 3.07 | 4.47 | 5.67 | 7.07 |
| S(W/HC)166♀ | 9.00 | 5.73 | 2.80 | 3.27 | 3.80 |
| Average | 3.748 | 4.033 | 3.446 | 3.729 | 3.857 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 3.07 | 2.13 | 3.93 | 5.27 | 10.53 |
| S(H)80♂ | 3.33 | 3.53 | 7.33 | 3.07 | 6.33 |
| S(HW)114♂ | 4.73 | 2.33 | 3.67 | 1.87 | 1.67 |
| S(CW)126♂ | 2.00 | 1.73 | 2.00 | 1.91 | 1.91 |
| S(HW)130♂ | 4.60 | 2.73 | 5.60 | 6.53 | 2.80 |
| S(HW)131♂ | 5.33 | 2.47 | 2.13 | 2.47 | 2.36 |
| S(HW)132♂ | 2.27 | 2.87 | 3.80 | 2.27 | 4.67 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 2.07 | 3.60 | 3.20 | 4.07 | 2.07 |
| S(CW)149♂ | 8.27 | 5.40 | 2.60 | 2.67 | 2.73 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EE)73♀ | 2.13 | 2.73 | 2.29 | 2.29 | 2.29 |
| S(C/EE)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.87 | 4.80 | 3.47 | 2.13 | 2.27 |
| S(CW)129♀ | 3.07 | 5.47 | 3.87 | 5.93 | 3.20 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 3.13 | 2.60 | 2.53 | 2.75 | 2.75 |
| S(W/HC)144♀ | 3.40 | 5.07 | 3.67 | 4.53 | 3.73 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 8.87 | 3.20 | 2.93 | 2.40 | 2.40 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 4.73 | 3.13 | 3.20 | 3.13 | 4.87 |
| S(W/HC)166♀ | 3.07 | 3.87 | 3.47 | 3.13 | 1.73 |
| Average | 3.367 | 3.091 | 3.159 | 3.050 | 3.113 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 3.67 | 4.93 | 3.33 | 4.80 | 6.47 |
| S(H)80♂ | 5.80 | 10.80 | 8.67 | 6.93 | 8.87 |
| S(HW)114♂ | 2.13 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.40 | 2.93 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.87 | 2.13 | 2.40 | 3.20 | 3.07 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 3.27 | 2.27 | 1.73 | 1.73 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/FB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/FB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.53 | 2.13 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 5.00 | 3.67 | 3.93 | 3.20 | 11.00 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 2.73 | 4.07 | 2.87 | 5.07 | 4.00 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 3.93 | 5.53 | 4.07 | 3.47 | 17.87 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 5.47 | 3.73 | 2.53 | 3.60 | 4.07 |
| S(W/HC)166♀ | 5.47 | 3.67 | 2.07 | 2.07 | 1.87 |
| Average | 3.044 | 3.160 | 2.841 | 2.924 | 3.759 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 4.87 | 4.27 | 3.87 | 3.53 | 2.53 |
| S(H)80♂ | 8.13 | 6.53 | 5.53 | 8.27 | 17.33 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.53 | 2.47 | 2.13 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/FB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/FB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 2.73 | 6.47 | 9.60 | 6.47 | 5.00 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 2.33 | 5.27 | 3.47 | 3.67 | 4.20 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 7.40 | 16.00 | 5.47 | 4.27 | 7.93 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 4.47 | 3.20 | 3.80 | 3.60 | 4.33 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 3.000 | 3.392 | 3.047 | 2.991 | 3.375 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 8.07 | 7.13 | 4.73 | 19.67 | 2.53 |
| S(H)80♂ | 5.60 | 9.33 | 7.73 | 7.27 | 11.60 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 5.60 | 5.73 | 3.53 | 16.53 | 4.27 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 10.67 | 5.00 | 2.87 | 4.27 | 5.00 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 2.93 | 6.93 | 4.13 | 6.67 | 3.73 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.40 | 3.47 | 2.53 | 4.20 | 4.00 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 3.173 | 3.251 | 2.848 | 3.951 | 3.035 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 5.07 | 3.40 | 9.67 | 12.13 | 5.27 |
| S(H)80♂ | 8.40 | 7.00 | 8.00 | 7.80 | 9.47 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/TE)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/TE)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 6.47 | 7.20 | 5.93 | 3.00 | 3.93 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 3.20 | 8.73 | 4.87 | 4.47 | 4.73 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 4.33 | 4.33 | 4.33 | 4.73 | 2.93 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 5.53 | 2.67 | 1.93 | 2.07 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 3.008 | 3.109 | 3.155 | 3.138 | 2.949 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Ent # | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 6.73 | 10.00 | 4.93 | 3.13 | 14.20 |
| S(H)80♂ | 7.80 | 6.07 | 6.40 | 4.73 | 5.93 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.36 | 2.38 | 2.38 | 2.38 | 2.36 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.16 | 3.16 | 3.16 | 3.16 | 3.16 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EE)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EE)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 5.13 | 6.87 | 5.20 | 4.73 | 5.07 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 3.87 | 2.67 | 3.20 | 2.20 | 3.60 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 3.60 | 4.40 | 13.00 | 2.27 | 2.93 |
| S(CF)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 2.976 | 3.072 | 3.163 | 2.640 | 3.129 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 3.80 | 3.00 | 4.67 | 4.93 | 2.20 |
| S(H)80♂ | 4.53 | 4.53 | 5.33 | 3.60 | 10.80 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 2.87 | 7.20 | 4.47 | 6.93 | 5.33 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 4.40 | 4.60 | 4.00 | 2.40 | 2.20 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 2.27 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 2.667 | 2.799 | 2.770 | 2.750 | 2.839 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 13.93 | 2.93 | 1.93 | 4.00 | 5.27 |
| S(H)80♂ | 5.53 | 4.73 | 5.87 | 5.93 | 6.00 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 6.40 | 5.27 | 5.20 | 2.67 | 6.47 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 2.33 | 2.31 | 2.31 | 2.31 | 2.31 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 3.094 | 2.663 | 2.665 | 2.652 | 2.823 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 5.20 | 6.67 | 4.73 | 3.07 | 2.67 |
| S(H)80♂ | 5.20 | 4.53 | 4.20 | 5.60 | 5.33 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 5.53 | 6.87 | 4.20 | 4.80 | 4.93 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 2.763 | 2.834 | 2.669 | 2.681 | 2.663 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | 4.87 | 4.47 | 2.93 | 5.00 | 7.20 |
| S(H)80♂ | 5.93 | 5.87 | 6.13 | 7.33 | 8.53 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.36 | 2.36 | 2.36 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 2.73 | 2.67 | 2.67 | 2.69 | 2.69 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 2.683 | 2.665 | 2.623 | 2.732 | 2.846 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat # | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|-------------|--------|--------|--------|--------|---------|
| S(H)77♂ | 4.53 | 2.87 | 2.13 | 9.67 | 2.13 |
| S(H)80♂ | 9.00 | 7.20 | 6.47 | 9.07 | 7.33 |
| S(HW)114♂ | 1.89 | 1.89 | 1.89 | 1.89 | 1.89 |
| S(CW)126♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(HW)130♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(HW)131♂ | 2.36 | 2.36 | 2.36 | 2.36 | 2.36 |
| S(HW)132♂ | 2.38 | 2.38 | 2.38 | 2.38 | 2.38 |
| S(HW)133♂ | 2.51 | 2.51 | 2.51 | 2.51 | 2.51 |
| S(HW)134♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(CH)140♂ | 2.71 | 2.71 | 2.71 | 2.71 | 2.71 |
| S(W/HC)143♂ | 3.18 | 3.18 | 3.18 | 3.18 | 3.18 |
| S(CW)147♂ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(CW)148♂ | 1.91 | 1.91 | 1.91 | 1.91 | 1.91 |
| S(CW)149♂ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)155♂ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)156♂ | 2.91 | 2.91 | 2.91 | 2.91 | 2.91 |
| S(C/EB)73♀ | 2.29 | 2.29 | 2.29 | 2.29 | 2.29 |
| S(C/EB)74♀ | 3.02 | 3.02 | 3.02 | 3.02 | 3.02 |
| S(H)81♀ | 2.56 | 2.56 | 2.56 | 2.56 | 2.56 |
| S(CW)128♀ | 1.98 | 1.98 | 1.98 | 1.98 | 1.98 |
| S(CW)129♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(CH)141♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(CH)142♀ | 2.75 | 2.75 | 2.75 | 2.75 | 2.75 |
| S(W/HC)144♀ | 2.31 | 2.31 | 2.31 | 2.31 | 2.31 |
| S(W/HC)145♀ | 2.69 | 2.69 | 2.69 | 2.69 | 2.69 |
| S(W/HC)146♀ | 2.49 | 2.49 | 2.49 | 2.49 | 2.49 |
| S(CH)157♀ | 2.96 | 2.96 | 2.96 | 2.96 | 2.96 |
| S(CH)159♀ | 2.85 | 2.85 | 2.85 | 2.85 | 2.85 |
| S(CH)160♀ | 2.22 | 2.22 | 2.22 | 2.22 | 2.22 |
| S(W/HC)166♀ | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Average | 2.772 | 2.657 | 2.608 | 2.946 | 2.637 |

Table Xa. Inclined Plane Learning by
Normal Rats.

| Rat | Failed to learn. | Days required to learn. |
|-------------|---------------------|----------------------------|
| S(H)77♂ | 1 | 100- |
| S(H)80♂ | 1 | 100- |
| S(HW)114♂ | | 51 |
| S(CW)126♂ | | 48 |
| S(HW)130♂ | | 52 |
| S(HW)131♂ | | 49 |
| S(HW)132♂ | | 58 |
| S(HW)133♂ | | 12 |
| S(HW)134♂ | | 9 |
| S(CH)140♂ | | 17 |
| S(W/HC)143♂ | | 10 |
| S(CW)147♂ | | 15 |
| S(CW)148♂ | | 54 |
| S(CW)149♂ | | 50 |
| S(CH)155♂ | | 28 |
| S(CH)156♂ | | 20 |
| S(C/EB)73♀ | | 47 |
| S(C/EB)74♀ | | 36 |
| S(H)81♀ | | 45 |
| S(CW)128♀ | | 52 |
| S(CW)129♀ | | 93 |
| S(CH)141♀ | | 24 |
| S(CH)142♀ | | 48 |
| S(W/HC)144♀ | | 81 |
| S(W/HC)145♀ | | 28 |
| S(W/HC)146♀ | | 76 |
| S(CH)157♀ | | 23 |
| S(CH)159♀ | | 29 |
| S(CH)160♀ | | 69 |
| S(W/HC)166♀ | | 55 |
| Total | 2 | Average 45.97 |

Table Xa. Inclined Plane Learning by
Normal Rats.

First trial
 Rat # after 60 days' rest.

| | |
|-------------|--------|
| S(H)77♂ | ----- |
| S(H)80♂ | ----- |
| S(HW)114♂ | 24.00 |
| S(CW)126♂ | 7.00 |
| S(HW)130♂ | 9.60 |
| S(HW)131♂ | 7.60 |
| S(HW)132♂ | 3.40 |
| S(HW)133♂ | 8.80 |
| S(HW)134♂ | 54.60 |
| S(CH)140♂ | 33.80 |
| S(W/HC)143♂ | 14.00 |
| S(CW)147♂ | 12.40 |
| S(CW)148♂ | 90.00 |
| S(CW)149♂ | 25.40 |
| S(CH)155♂ | 6.20 |
| S(CH)156♂ | 6.40 |
| S(C/EB)73♀ | 5.00 |
| S(C/EB)74♀ | 5.80 |
| S(X)81♀ | 8.80 |
| S(CW)128♀ | 56.20 |
| S(CW)129♀ | 15.20 |
| S(CH)141♀ | 17.40 |
| S(CH)142♀ | 33.80 |
| S(W/HC)144♀ | 66.00 |
| S(W/HC)145♀ | 2.40 |
| S(W/HC)146♀ | 24.20 |
| S(CH)157♀ | 105.00 |
| S(CH)159♀ | 30.40 |
| S(CH)160♀ | 2.20 |
| S(W/HC)166♀ | 2.00 |
| ----- | |
| Average | 22.587 |
| ----- | |

Table Xb. Absolute Retention of Normal Rats.

| Rat # | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------|--------|-------|-------|-------|-------|
| S(H)77♂ | ----- | ----- | ----- | ----- | ----- |
| S(H)80♂ | ----- | ----- | ----- | ----- | ----- |
| S(HW)114♀ | 9.53 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)126♂ | 4.27 | 5.47 | 3.80 | 2.87 | 8.60 |
| S(HW)130♂ | 5.27 | 3.27 | 4.00 | 2.20 | 2.20 |
| S(HW)131♂ | 5.67 | 2.87 | 2.87 | 2.87 | 2.87 |
| S(HW)132♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(HW)133♂ | 4.87 | 3.33 | 3.60 | 3.60 | 3.60 |
| S(HW)134♂ | 32.93 | 4.53 | 3.47 | 18.00 | 2.73 |
| S(CH)140♂ | 142.07 | 10.40 | 4.73 | 5.40 | 3.93 |
| S(W/HC)143♂ | 13.60 | 5.33 | 3.07 | 3.07 | 3.07 |
| S(CW)147♂ | 7.60 | 3.93 | 4.20 | 5.80 | 8.60 |
| S(CW)148♂ | 34.40 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)149♂ | 99.33 | 4.93 | 8.20 | 2.93 | 2.93 |
| S(CH)155♂ | 5.27 | 5.33 | 2.80 | 2.80 | 2.80 |
| S(CH)156♂ | 5.53 | 5.07 | 9.87 | 8.33 | 3.47 |
| S(C/EB)73♀ | 5.80 | 5.20 | 3.27 | 4.27 | 3.73 |
| S(C/EB)74♀ | 3.87 | 8.93 | 2.33 | 2.33 | 2.33 |
| S(H)81♀ | 14.33 | 7.93 | 2.80 | 2.80 | 2.80 |
| S(CW)128♀ | 23.13 | 12.87 | 3.40 | 2.93 | 10.27 |
| S(CW)129♀ | 7.87 | 3.47 | 6.47 | 5.33 | 2.67 |
| S(CH)141♀ | 8.00 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(CH)142♀ | 12.60 | 4.40 | 9.33 | 2.20 | 2.20 |
| S(W/HC)144♀ | 28.13 | 6.80 | 2.73 | 2.73 | 2.73 |
| S(W/HC)145♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(W/HC)146♀ | 34.27 | 8.27 | 2.53 | 2.53 | 2.53 |
| S(CH)157♀ | 100.73 | 21.73 | 4.47 | 5.33 | 4.07 |
| S(CH)159♀ | 12.33 | 20.67 | 14.13 | 6.40 | 45.60 |
| S(CH)160♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(W/HC)166♀ | 3.60 | 4.33 | 3.27 | 2.40 | 2.40 |
| Average | 22.598 | 6.198 | 4.279 | 3.985 | 5.021 |

Table Xc. Inclined Plane Relearning by
Normal Rats.

| Rat # | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------|-------|-------|-------|-------|--------|
| S(H)77♂ | ----- | ----- | ----- | ----- | ----- |
| S(H)80♂ | ----- | ----- | ----- | ----- | ----- |
| S(HW)114♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)126♂ | 3.40 | 8.67 | 3.93 | 5.40 | 2.73 |
| S(HW)130♂ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(HW)131♂ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| S(HW)132♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(HW)133♂ | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| S(HW)134♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(CH)140♂ | 4.07 | 5.60 | 2.40 | 2.40 | 2.40 |
| S(W/HC)143♂ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| S(CW)147♂ | 7.73 | 4.33 | 10.73 | 4.53 | 5.07 |
| S(CW)148♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)149♂ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| S(CH)155♂ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| S(CH)156♂ | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 |
| S(C/EB)73♀ | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| S(C/EB)74♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| S(H)81♀ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| S(CW)128♀ | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| S(CW)129♀ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)141♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(CH)142♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(W/HC)144♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(W/HC)145♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(W/HC)146♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(CH)157♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(CH)159♀ | 8.33 | 19.27 | 21.60 | 10.20 | 19.93 |
| S(CH)160♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(W/HC)166♀ | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| Average | 3.057 | 3.569 | 3.598 | 3.021 | 3.293 |

Table Xc. Inclined Plane Relearning by
Normal Rats.

| Rat # | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------|--------|--------|--------|--------|--------|
| S(H)77♂ | ----- | ----- | ----- | ----- | ----- |
| S(H)80♂ | ----- | ----- | ----- | ----- | ----- |
| S(HW)114♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)126♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(HW)130♂ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(HW)131♂ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| S(HW)132♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(HW)133♂ | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| S(HW)134♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(CH)140♂ | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| S(W/HC)143♂ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| S(CW)147♂ | 6.27 | 5.33 | 5.73 | 3.60 | 4.47 |
| S(CW)148♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)149♂ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| S(CH)155♂ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| S(CH)156♂ | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 |
| S(C/EB)73♀ | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| S(C/EB)74♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| S(H)81♀ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| S(CW)128♀ | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| S(CW)129♀ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)141♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(CH)142♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(W/HC)144♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(W/HC)145♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(W/HC)146♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(CH)157♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(CH)159♀ | 8.53 | 30.40 | 16.67 | 2.93 | 2.93 |
| S(CH)160♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(CH)166♀ | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| Average | 2.929 | 3.676 | 3.200 | 2.633 | 2.664 |

Table Xc. Inclined Plane Relearning by
Normal Rats.

| Rat # | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 to 50 |
|-------------|--------|--------|--------|--------|--------------|
| S(H)77♂ | ----- | ----- | ----- | ----- | ----- |
| S(H)80♂ | ----- | ----- | ----- | ----- | ----- |
| S(HW)114♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)126♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(HW)130♂ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(HW)131♂ | 2.87 | 2.87 | 2.87 | 2.87 | 2.87 |
| S(HW)132♂ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(HW)133♂ | 3.60 | 3.60 | 3.60 | 3.60 | 3.60 |
| S(HW)134♂ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(CH)140♂ | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| S(W/HC)143♂ | 3.07 | 3.07 | 3.07 | 3.07 | 3.07 |
| S(CW)147♂ | 2.27 | 2.27 | 2.27 | 2.27 | 2.27 |
| S(CW)148♂ | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| S(CW)149♂ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| S(CH)155♂ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| S(CH)156♂ | 3.47 | 3.47 | 3.47 | 3.47 | 3.47 |
| S(C/EB)73♀ | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| S(C/EB)74♀ | 2.33 | 2.33 | 2.33 | 2.33 | 2.33 |
| S(H)81♀ | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 |
| S(CW)128♀ | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 |
| S(CW)129♀ | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| S(CH)141♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(CH)142♀ | 2.20 | 2.20 | 2.20 | 2.20 | 2.20 |
| S(W/HC)144♀ | 2.73 | 2.73 | 2.73 | 2.73 | 2.73 |
| S(W/HC)145♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(W/HC)146♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(CH)157♀ | 2.53 | 2.53 | 2.53 | 2.53 | 2.53 |
| S(CH)159♀ | 2.93 | 2.93 | 2.93 | 2.93 | 2.93 |
| S(CH)160♀ | 2.60 | 2.60 | 2.60 | 2.60 | 2.60 |
| S(W/HC)166♀ | 2.40 | 2.40 | 2.40 | 2.40 | 2.40 |
| Average | 2.776 | 2.586 | 2.586 | 2.586 | 2.596 |

Table Xc. Inclined Plane Relearning by
Normal Rats.

| Rat # | Failed to relearn. | Days required to relearn. |
|-------------|-----------------------|------------------------------|
| ----- | | |
| S(H)77♂ | | -- |
| S(H)80♂ | | -- |
| S(HW)114♂ | | 2 |
| S(CW)126♂ | | 10 |
| S(HW)130♂ | | 4 |
| S(HW)131♂ | | 2 |
| S(HW)132♂ | | 1 |
| S(HW)133♂ | | 3 |
| S(HW)134♂ | | 5 |
| S(CH)140♂ | | 8 |
| S(W/HC)143♂ | | 3 |
| S(CW)147♂ | | 17 |
| S(CW)148♂ | | 2 |
| S(CW)149♂ | | 4 |
| S(CH)155♂ | | 3 |
| S(CH)156♂ | | 5 |
| S(C/EB)73♀ | | 6 |
| S(C/EB)74♀ | | 3 |
| S(H)81♀ | | 3 |
| S(CW)128♀ | | 6 |
| S(CW)129♀ | | 6 |
| S(CH)141♀ | | 2 |
| S(CH)142♀ | | 4 |
| S(W/HC)144♀ | | 3 |
| S(W/HC)145♀ | | 1 |
| S(W/HC)146♀ | | 3 |
| S(CH)157♀ | | 6 |
| S(CH)159♀ | | 14 |
| S(CH)160♀ | | 1 |
| S(CH)166♀ | | 4 |
| ----- | | |
| Total | 0 | : Average 4.68 |
| ----- | | |

Table Xc. Inclined Plane Relearning by
Normal Rats.

| Rat # | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms | Water in brain % |
|-------------|--------------------------|----------------------------|-----------------------------|---------------------------|------------------------|
| S(H)77♂ | 181. | 140.1 | 1.7259 | .5058 | 78.45 |
| S(H)80♂ | 182. | 156.9 | 1.7174 | .4982 | 78.27 |
| S(HW)114♂ | 197. | 194.5 | 1.7595 | .5488 | 78.27 |
| S(CW)126♂ | 202. | 203.2 | 1.7307 | .5237 | 78.32 |
| S(HW)130♂ | 193. | 168.1 | 1.8946 | .5564 | 78.33 |
| S(HW)131♂ | 205. | 224.8 | 1.9185 | .5560 | 78.38 |
| S(HW)132♂ | 205. | 248.0 | 1.9762 | .6208 | 78.52 |
| S(HW)133♂ | 200. | 187.9 | 1.8324 | .5722 | 78.18 |
| S(HW)134♂ | 215. | 251.9 | 1.9471 | .5695 | 78.24 |
| S(CH)140♂ | 200. | 202.2 | 1.9139 | .5759 | 77.95 |
| S(W/HC)143♂ | 220. | 254.2 | 2.0346 | .6359 | 78.00 |
| S(CW)147♂ | 203. | 253.3 | 1.7681 | .5413 | 78.81 |
| S(CW)148♂ | 205. | 233.8 | 1.8092 | .5590 | 78.44 |
| S(CW)149♂ | 203. | 236.5 | 1.7520 | .5204 | 78.49 |
| S(CH)155♂ | 207. | 252.7 | 1.8954 | .5816 | 78.23 |
| S(CH)156♂ | 211. | 242.0 | 1.9324 | .5844 | 78.30 |
| S(C/EB)73♀ | 181. | 131.7 | 1.6775 | .4930 | 78.32 |
| S(C/EB)74♀ | 179. | 128.3 | 1.6299 | .4838 | 78.17 |
| S(H)81♀ | 171. | 119.1 | 1.5668 | .4634 | 77.97 |
| S(CW)128♀ | 192. | 170.0 | 1.7815 | .5151 | 78.45 |
| S(CW)129♀ | 199. | 196.1 | 1.7988 | .5570 | 78.53 |
| S(CH)141♀ | 182. | 147.5 | 1.9036 | .5316 | 78.41 |
| S(CH)142♀ | 195. | 189.5 | 1.9386 | .5614 | 78.24 |
| S(W/HC)144♀ | 188. | 138.6 | 1.7628 | .5200 | 77.81 |
| S(W/HC)145♀ | 193. | 177.7 | 1.7723 | .5107 | 78.34 |
| S(W/HC)146♀ | 192. | 175.0 | 1.8434 | .5541 | 77.88 |
| S(CH)157♀ | 189. | 183.8 | 1.8836 | .5352 | 78.46 |
| S(CH)159♀ | 175. | 148.1 | 1.7347 | .5021 | 78.44 |
| S(CH)160♀ | 192. | 179.3 | 1.8745 | .5496 | 78.50 |
| S(W/HC)166♀ | 176. | 140.6 | 1.7760 | .4497 | 78.87 |
| Average | 194.43 | 189.18 | 1.81840 | .53922 | 78.319 |

Table Xd. Anatomical Data of Normal Rats.

| Rat # | Water | Brain wt. | Brain wt. | Age |
|-------------|---------|--------------------------------|--------------------------------|------------------|
| | in cord | in relation to body length. | in relation to body weight. | killed. Days. |
| ----- | | | | |
| S(H)77♂ | 72.40 | .95355 | 1.23101 | 184. |
| S(H)80♂ | 71.58 | .94363 | 1.09458 | 184. |
| S(HW)114♂ | 71.23 | .89315 | .90463 | 211. |
| S(CW)126♂ | 71.24 | .85678 | .85172 | 207. |
| S(HW)130♂ | 71.75 | .98166 | 1.12707 | 197. |
| S(HW)131♂ | 71.56 | .93585 | .85343 | 197. |
| S(HW)132♂ | 71.12 | .96400 | .79685 | 250. |
| S(HW)133♂ | 71.39 | .91620 | .97520 | 197. |
| S(HW)134♂ | 70.76 | .90563 | .77297 | 197. |
| S(CH)140♂ | 70.45 | .95695 | .94654 | 168. |
| S(W/HC)143♂ | 69.43 | .92482 | .80039 | 196. |
| S(CW)147♂ | 71.61 | .87099 | .69803 | 174. |
| S(CW)148♂ | 71.15 | .88254 | .77382 | 185. |
| S(CW)149♂ | 70.98 | .86305 | .74080 | 185. |
| S(CH)155♂ | 70.56 | .91565 | .75006 | 177. |
| S(CH)156♂ | 71.42 | .91583 | .79851 | 166. |
| S(C/EB)73♀ | 71.74 | .92680 | 1.27373 | 197. |
| S(C/EB)74♀ | 71.99 | .91056 | 1.27038 | 197. |
| S(H)81♀ | 71.58 | .91626 | 1.31553 | 184. |
| S(CW)128♀ | 70.47 | .92792 | 1.04800 | 207. |
| S(CW)129♀ | 70.99 | .90392 | .91729 | 260. |
| S(CH)141♀ | 71.56 | 1.04593 | 1.29058 | 168. |
| S(CH)142♀ | 70.93 | .99415 | 1.02301 | 221. |
| S(W/HC)144♀ | 69.98 | .93766 | 1.27186 | 207. |
| S(W/HC)145♀ | 71.10 | .91829 | .99736 | 196. |
| S(W/HC)146♀ | 70.37 | .96010 | 1.05337 | 207. |
| S(CH)157♀ | 71.60 | .94370 | 1.02481 | 177. |
| S(CH)159♀ | 71.98 | .99126 | 1.17130 | 177. |
| S(CH)160♀ | 71.47 | .97630 | 1.04545 | 177. |
| S(W/HC)166♀ | 72.20 | 1.00909 | 1.26316 | 172. |
| ----- | | | | |
| Average | 71.223 | .93474 | 1.00275 | 194. |
| ----- | | | | |

Table Xd. Anatomical Data of Normal Rats.

| <u>Learning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-----------------|----------|----------|---------|--------|--------|
| Inb. Avg. | 4673.131 | 1218.976 | 166.997 | 56.576 | 22.926 |
| Nor. Avg. | 2769.953 | 1072.722 | 133.287 | 61.600 | 23.995 |

| <u>Learning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 36.878 | 12.422 | 11.061 | 10.751 | 8.136 |
| Nor. Avg. | 25.374 | 13.478 | 11.704 | 11.280 | 6.961 |

| <u>Learning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 9.383 | 7.876 | 8.625 | 7.188 | 9.586 |
| Nor. Avg. | 6.759 | 6.858 | 6.347 | 7.045 | 6.383 |

| <u>Learning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 8.710 | 8.069 | 7.364 | 9.191 | 6.717 |
| Nor. Avg. | 5.069 | 5.400 | 6.158 | 5.376 | 5.352 |

| <u>Learning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.919 | 6.363 | 6.951 | 6.458 | 7.329 |
| Nor. Avg. | 5.284 | 4.378 | 5.173 | 5.280 | 5.025 |

| <u>Learning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 5.674 | 6.262 | 6.627 | 5.514 | 27.802 |
| Nor. Avg. | 4.978 | 5.139 | 5.276 | 4.302 | 4.303 |

| <u>Learning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 7.440 | 6.707 | 6.416 | 6.775 | 6.957 |
| Nor. Avg. | 4.354 | 5.075 | 3.583 | 3.868 | 4.024 |

Table XI. Comparative Summary of Inbred and
Normal Inclined Plane Results.

| <u>Learnin</u> | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 6.957 | 5.334 | 5.689 | 5.479 | 5.289 |
| Nor. Avg. | 4.121 | 4.457 | 3.958 | 4.905 | 4.096 |

| <u>Learning</u> | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.898 | 4.938 | 5.093 | 4.762 | 4.553 |
| Nor. Avg. | 3.748 | 4.033 | 3.446 | 3.729 | 3.857 |

| <u>Learning</u> | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.011 | 5.076 | 3.831 | 4.991 | 5.105 |
| Nor. Avg. | 3.367 | 3.091 | 3.159 | 3.050 | 3.113 |

| <u>Learning</u> | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.762 | 4.408 | 4.693 | 5.006 | 4.191 |
| Nor. Avg. | 3.044 | 3.160 | 2.841 | 2.924 | 3.759 |

| <u>Learning</u> | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.072 | 3.916 | 5.909 | 6.235 | 4.953 |
| Nor. Avg. | 3.000 | 3.392 | 3.047 | 2.991 | 3.375 |

| <u>Learning</u> | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.172 | 5.026 | 4.437 | 3.317 | 3.741 |
| Nor. Avg. | 3.173 | 3.251 | 2.848 | 3.951 | 3.035 |

| <u>Learning</u> | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.160 | 3.955 | 5.858 | 4.806 | 4.260 |
| Nor. Avg. | 3.092 | 3.109 | 3.155 | 3.138 | 2.949 |

Table XI. Comparative Summary of Inbred and Normal Inclined Plane Results.

| <u>Learning</u> | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 4.393 | 3.869 | 3.461 | 3.713 | 3.649 |
| Nor. Avg. | 2.976 | 3.072 | 3.163 | 2.640 | 3.129 |

| <u>Learning</u> | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 3.726 | 3.669 | 3.646 | 4.043 | 3.648 |
| Nor. Avg. | 2.667 | 2.799 | 2.770 | 2.750 | 2.839 |

| <u>Learning</u> | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 3.359 | 3.465 | 3.558 | 3.322 | 3.471 |
| Nor. Avg. | 3.094 | 2.663 | 2.665 | 2.652 | 2.823 |

| <u>Learning</u> | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 3.729 | 3.388 | 3.686 | 3.639 | 4.170 |
| Nor. Avg. | 2.763 | 2.834 | 2.669 | 2.681 | 2.663 |

| <u>Learning</u> | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|-----------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 3.501 | 3.393 | 4.124 | 3.463 | 3.457 |
| Nor. Avg. | 2.693 | 2.665 | 2.623 | 2.732 | 2.846 |

| <u>Learning</u> | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|-----------------|--------|--------|--------|--------|---------|
| Inb. Avg. | 2.999 | 3.460 | 3.604 | 2.982 | 3.510 |
| Nor. Avg. | 2.772 | 2.657 | 2.608 | 2.946 | 2.637 |

| | Failed to learn. | Days required to learn. | Absolute retention. |
|-----------|---------------------|----------------------------|------------------------|
| Inb. Avg. | 11 | 73.70+ | 31.842 |
| Nor. Avg. | 2 | 45.97+ | 22.587 |

Table XI. Comparative Summary of Inbred and Normal Inclined Plane Results.

| <u>Relearning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--------|-------|-------|-------|-------|
| Inb. Avg. | 41.789 | 7.301 | 5.436 | 4.783 | 5.067 |
| Nor. Avg. | 22.598 | 6.198 | 4.279 | 3.985 | 5.021 |

| <u>Relearning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------------|-------|-------|-------|-------|--------|
| Inb. Avg. | 5.175 | 4.239 | 3.404 | 3.186 | 2.928 |
| Nor. Avg. | 3.057 | 3.569 | 3.598 | 3.021 | 3.293 |

| <u>Relearning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 3.508 | 2.712 | 2.796 | 2.845 | 2.807 |
| Nor. Avg. | 2.929 | 3.676 | 3.200 | 2.633 | 2.664 |

| <u>Relearning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-------------------|--------|--------|--------|--------|--------|
| Inb. Avg. | 2.610 | 2.603 | 2.596 | 2.733 | 2.677 |
| Nor. Avg. | 2.776 | 2.586 | 2.586 | 2.586 | 2.586 |

| <u>Relearning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 to 50 |
|-------------------|--------|--------|--------|--------|--------------|
| Inb. Avg. | 2.607 | 2.729 | 2.596 | 2.554 | 2.554 |
| Nor. Avg. | 2.586 | 2.586 | 2.586 | 2.586 | 2.586 |

Table XI. Comparative Summary of Inbred and Normal Inclined Plane Results.

| | Failed to relearn. | Days required to relearn. |
|-----------|-----------------------|------------------------------|
| Inb. Avg. | 0 | 6.74 |
| Nor. Avg. | 0 | 4.68 |

| Anatomical Data | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|--------------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| Inb. Avg. | 195.93 | 184.37 | 1.72083 | .53787 | 78.363 |
| Nor. Avg. | 194.43 | 189.18 | 1.81840 | .53922 | 78.319 |

| Anatomical Data | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|--------------------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| Inb. Avg. | 71.437 | .87972 | .97889 | 220. |
| Nor. Avg. | 71.223 | .93474 | 1.00275 | 194. |

Table XI. Comparative Summary of Inbred and
Normal Inclined Plane Results.

| <u>Learning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-----------------|----------|----------|---------|--------|--------|
| 7th Avg. | 5656.546 | 1463.707 | 123.213 | 53.583 | 17.159 |
| 8th Avg. | 3689.716 | 974.245 | 210.781 | 58.369 | 28.693 |

| <u>Learning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 11.142 | 11.373 | 8.160 | 8.845 | 5.853 |
| 8th Avg. | 62.613 | 13.471 | 13.961 | 12.657 | 10.419 |

| <u>Learning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 10.855 | 5.459 | 6.037 | 5.197 | 6.367 |
| 8th Avg. | 7.911 | 10.294 | 11.213 | 9.178 | 12.805 |

| <u>Learning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 5.821 | 4.732 | 6.714 | 6.351 | 5.310 |
| 8th Avg. | 11.599 | 11.407 | 8.013 | 12.030 | 8.124 |

| <u>Learning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 5.592 | 5.538 | 4.934 | 6.116 | 5.481 |
| 8th Avg. | 8.245 | 7.187 | 8.969 | 6.801 | 9.177 |

| <u>Learning</u> | Day 26 | Day 27 | Day 28 | Day 29 | Day 30 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 6.204 | 5.636 | 5.809 | 3.965 | 4.875 |
| 8th Avg. | 5.143 | 6.889 | 7.445 | 7.063 | 50.729 |

| <u>Learning</u> | Day 31 | Day 32 | Day 33 | Day 34 | Day 35 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.085 | 5.884 | 4.733 | 4.195 | 4.526 |
| 8th Avg. | 10.795 | 7.529 | 8.099 | 9.355 | 9.389 |

Table XII. Comparative Summary of 7th and 8th
Generation Inbred Inclined Plane
Results.

| <u>Learning</u> | Day 36 | Day 37 | Day 38 | Day 39 | Day 40 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.481 | 3.921 | 4.192 | 4.467 | 4.561 |
| 8th Avg. | 9.433 | 6.747 | 7.186 | 6.491 | 6.017 |

| <u>Learning</u> | Day 41 | Day 42 | Day 43 | Day 44 | Day 45 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.667 | 4.462 | 4.396 | 4.339 | 3.734 |
| 8th Avg. | 5.130 | 5.413 | 5.791 | 5.187 | 5.373 |

| <u>Learning</u> | Day 46 | Day 47 | Day 48 | Day 49 | Day 50 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.435 | 4.121 | 3.636 | 3.867 | 4.277 |
| 8th Avg. | 4.587 | 6.031 | 4.027 | 6.116 | 5.933 |

| <u>Learning</u> | Day 51 | Day 52 | Day 53 | Day 54 | Day 55 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.289 | 3.591 | 4.219 | 4.969 | 3.627 |
| 8th Avg. | 5.235 | 5.226 | 5.168 | 5.044 | 4.755 |

| <u>Learning</u> | Day 56 | Day 57 | Day 58 | Day 59 | Day 60 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.251 | 3.584 | 4.406 | 7.917 | 4.325 |
| 8th Avg. | 4.893 | 4.247 | 7.412 | 4.553 | 5.581 |

| <u>Learning</u> | Day 61 | Day 62 | Day 63 | Day 64 | Day 65 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.295 | 5.753 | 4.731 | 3.006 | 3.331 |
| 8th Avg. | 4.049 | 4.299 | 4.143 | 3.627 | 4.151 |

| <u>Learning</u> | Day 66 | Day 67 | Day 68 | Day 69 | Day 70 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.331 | 3.571 | 4.317 | 5.175 | 4.565 |
| 8th Avg. | 4.988 | 4.339 | 7.398 | 4.437 | 3.984 |

Table XII. Comparative Summary of 7th and 8th
Generation Inbred Inclined Plane
Results.

| <u>Learning</u> | Day 71 | Day 72 | Day 73 | Day 74 | Day 75 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.415 | 3.717 | 3.388 | 3.233 | 3.620 |
| 8th Avg. | 4.350 | 4.021 | 3.533 | 4.193 | 3.678 |

| <u>Learning</u> | Day 76 | Day 77 | Day 78 | Day 79 | Day 80 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.760 | 3.601 | 4.130 | 4.705 | 3.623 |
| 8th Avg. | 3.691 | 3.736 | 3.162 | 3.381 | 3.673 |

| <u>Learning</u> | Day 81 | Day 82 | Day 83 | Day 84 | Day 85 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.319 | 3.039 | 3.322 | 3.135 | 3.424 |
| 8th Avg. | 3.398 | 3.891 | 3.794 | 3.509 | 3.519 |

| <u>Learning</u> | Day 86 | Day 87 | Day 88 | Day 89 | Day 90 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.251 | 3.037 | 3.144 | 3.361 | 3.837 |
| 8th Avg. | 4.207 | 3.739 | 4.228 | 3.916 | 4.503 |

| <u>Learning</u> | Day 91 | Day 92 | Day 93 | Day 94 | Day 95 |
|-----------------|--------|--------|--------|--------|--------|
| 7th Avg. | 3.211 | 3.157 | 3.273 | 2.913 | 2.678 |
| 8th Avg. | 3.792 | 3.629 | 4.975 | 4.014 | 4.237 |

| <u>Learning</u> | Day 96 | Day 97 | Day 98 | Day 99 | Day 100 |
|-----------------|--------|--------|--------|--------|---------|
| 7th Avg. | 2.725 | 2.650 | 3.085 | 3.201 | 3.067 |
| 8th Avg. | 3.273 | 4.270 | 4.123 | 2.763 | 3.954 |

| | Failed to learn. | Days required to learn. | Absolute retention. |
|----------|---------------------|----------------------------|------------------------|
| 7th Avg. | 4 | 59.60+ | 44.945 |
| 8th Avg. | 7 | 86.53- | 13.825 |

Table XII. Comparative Summary of 7th and 8th
Generation Inbred Inclined Plane
Results.

| <u>Relearning</u> | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|-------------------|--------|-------|-------|-------|-------|
| 7th Avg. | 66.322 | 9.265 | 6.322 | 5.758 | 6.279 |
| 8th Avg. | 8.058 | 4.438 | 4.218 | 3.443 | 3.400 |

| <u>Relearning</u> | Day 6 | Day 7 | Day 8 | Day 9 | Day 10 |
|-------------------|-------|-------|-------|-------|--------|
| 7th Avg. | 6.297 | 4.467 | 5.879 | 3.728 | 3.109 |
| 8th Avg. | 3.633 | 3.925 | 2.441 | 2.441 | 2.441 |

| <u>Relearning</u> | Day 11 | Day 12 | Day 13 | Day 14 | Day 15 |
|-------------------|--------|--------|--------|--------|--------|
| 7th Avg. | 4.285 | 2.909 | 3.055 | 3.139 | 3.073 |
| 8th Avg. | 2.441 | 2.441 | 2.441 | 2.441 | 2.441 |

| <u>Relearning</u> | Day 16 | Day 17 | Day 18 | Day 19 | Day 20 |
|-------------------|--------|--------|--------|--------|--------|
| 7th Avg. | 2.733 | 2.721 | 2.709 | 2.945 | 2.848 |
| 8th Avg. | 2.441 | 2.441 | 2.441 | 2.441 | 2.441 |

| <u>Relearning</u> | Day 21 | Day 22 | Day 23 | Day 24 | Day 25 to 50 |
|-------------------|--------|--------|--------|--------|--------------|
| 7th Avg. | 2.727 | 2.939 | 2.709 | 2.636 | 2.636 |
| 8th Avg. | 2.441 | 2.441 | 2.441 | 2.441 | 2.441 |

Table XII. Comparative Summary of 7th and 8th
Generation Inbred Inclined Plane
Results.

| | Failed to relcarn. | Days required to relcarn. |
|----------|-----------------------|------------------------------|
| 7th Avg. | 0 | 8.00 |
| 8th Avg. | 0 | 5.00 |

| Anatomical Data | Body length in mm. | Body weight in grms. | Brain weight in grms. | Cord weight in grms. | Water in brain % |
|--------------------|--------------------------|----------------------------|-----------------------------|----------------------------|------------------------|
| 7th Avg. | 202.13 | 201.44 | 1.72868 | .54607 | 78.542 |
| 8th Avg. | 189.73 | 167.33 | 1.71299 | .52967 | 78.185 |

| Anatomical Data | Water in cord % | % Brain wt. in relation to body length. | % Brain wt. in relation to body weight. | Age killed. Days. |
|--------------------|-----------------------|-----------------------------------------------|-----------------------------------------------|-------------------------|
| 7th Avg. | 71.569 | .85622 | .90560 | 223 |
| 8th Avg. | 71.304 | .90323 | 1.05218 | 217 |

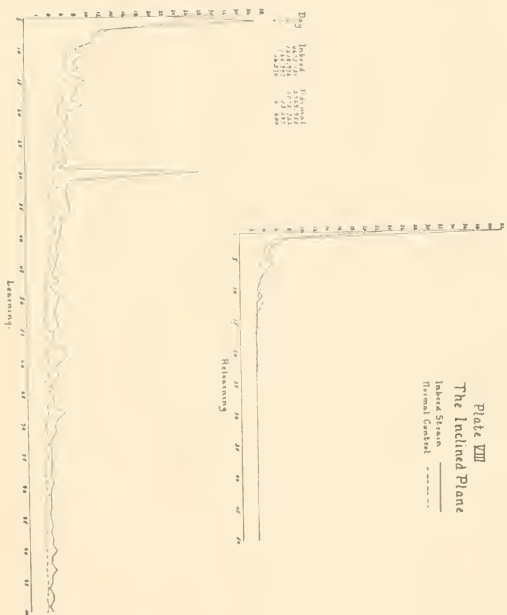
Table XII. Comparative Summary of 7th and 8th
Generation Inbred Inclined Plane
Results.



Swift
"Made
by
Edison"

Steady
rec-
ord.

Plate VIII
The Inclined Plane
Inbred Strain —————
Normal Control - - - - -



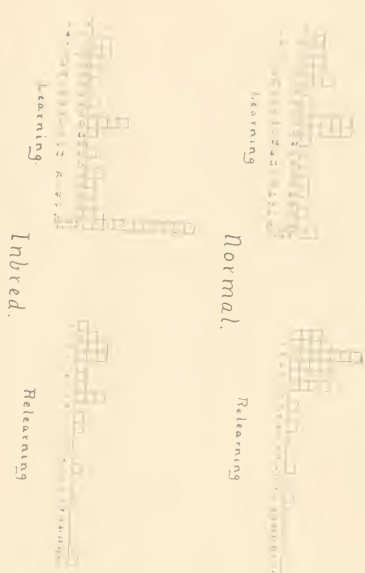


Plate IX
The Inclined Plane
Distribution of Learning
and Relearning



VI. SUMMARY AND CONCLUSIONS.

During the long course of experimentation, the results of which are here set forth, the writer became convinced that the deterioration in brain weight and in the ability to form habits were due, primarily, to the inbreeding. I would not maintain that inbreeding, per se, is necessarily productive of deleterious results if the parent stock be perfect in every respect; but it is impossible, by any means at our command, to determine physical perfection in any organism. As only two strains of inbred rats were used it seems best to let the question of the effects of inbreeding remain open until many strains of inbred rats, raised under different conditions of nourishment, temperature, etc., have been subjected to parallel experiments. The two strains of rats used by me were the products of inbreeding, and their brains were absolutely and relatively less, on the average, in weight than those of the normal rats used as control. And, too, the ability of the inbred rats to form habits agreed with the lesser brain weight in that they were inferior in both these respects to the normal control series.

There were used in all the experiments one hundred and twenty-four rats: sixty-two inbreds and sixty-two normal controls. An equal number of males and females from inbreds and normals were used in each experiment. Table XI shows the distribution of relative brain weights (with reference to body length) of the inbred rats and of the normal control series. The inbred distribution is represented by the lower curve, that of the normal by the upper curve. The greatest frequency in the inbred curve occurs at .86%; in the normal curve at

.92%. The inbred distribution is from .70% to .95%; that of the normals from .84% to 1.05%. The average relative brain weight (with reference to body length) of the sixty-two normal rats is .93351%; that of the inbreds is .87335%, or 6.44% less than that of the normals.

In order to compare the ability of the rats of the lesser brain weight strain (inbred rats) with a normal control series three experiments were used:

1. The Maze, in which all the rats used were given five trials daily until they had learned perfectly, or, failing to learn, had worked one hundred days (500 trials). At the expiration of sixty days after perfect learning the rats, except those failing to learn, were tested for retention and relearning until relearning was perfect, or, failing relearning, for fifty days (250 trials).
2. The Preliminary Inclined Plane, in which all the rats used were given five trials daily for twenty days (100 trials); at the expiration of sixty days after this period they were all tested for retention and relearning for a period of five days (25 trials).
3. The Inclined Plane, in which all the rats used were given three trials daily until they had learned perfectly, or, failing to learn, had worked one hundred days (300 trials). At the expiration of sixty days after perfect learning the rats, except those failing to learn, were tested for retention and relearning until relearning was perfect.

In all these experiments the strain of rats of lesser relative brain weight (the inbreds) learned less well, on the average, than the normal control series. In the maze and inclined plane experiments the average number of days required to learn and relearn and the time of absolute retention was

far greater in the case of the inbred rats than in that of the normal control series. In the maze experiment two inbreds and one normal failed to learn; two inbreds failed to relearn. In the inclined plane experiment eleven inbreds and two normals failed to learn.

The behavior of the normal rats consisting partly of B strain, coupled with the fact of their lesser relative brain weight suggests the importance of crossing a strain of inbreds of lesser brain weight with normal rats, and carrying out a series of tests such as have been presented in this paper, with two controls, one normal rats and one inferior brain weight inbreds.

In the maze experiment the inbred rats of the 7th generation did a little less well than those of the 6th. In the inclined plane experiment the rats of the 8th generation did a little less well than those of the 7th. It would seem (although deterioration of brain weight ceased after the 4th generation of inbreds) that the ability to form habits deteriorated progressively with successive generations.

The writer had intended to attempt a correlation, if any existed, between the number of days to learn a habit and the number required to relearn after sixty days. But almost all the rats relearned very quickly, without reference to the number of days required for learning; in numbers, too, the rats were too few. An investigation along such a line should consist of but one relatively simple experiment; two or three hundred rats of one sex only should be used; and the period of time between the completion of learning and the beginning of relearning should be lengthened to, at the least, ninety days.

The general result of the experiments here set forth

may be summed up as follows: On the average, the strain of inbred rats having an inferior brain weight did less well in learning to form habits than did the normal control series. From these results the following may be formulated: **Deterioration in brain weight in a strain of rats is accompanied by deterioration in the ability to form habits.**



Plate XI

*Distribution of Relative Brain Weights
(with reference to body length)*

62 Inbred Rats
62 Normal Rats

VITA.

Garner Cheney Basset was born in Boston, Massachusetts, June 17, 1873. He received his elementary and secondary education in the public schools of Boston and Newton, Massachusetts. From the year 1890 to the year 1908 he was in the wholesale shoe business, serving successively as receiving clerk, buyer, traveling salesman and superintendent. He entered the Collegiate Department of Clark University in 1908; was assistant in Biology during the year 1909-1910; assistant in Psychology during the year 1910-1911; and in 1911 he received the degree of Bachelor of Arts with highest honor. He spent the summer of 1910 at Cornell University in the Study of Experimental Psychology. In October, 1911, he entered the Johns Hopkins University, and was appointed University Fellow in that institution for the year 1912-1913.

While at the Johns Hopkins University, Mr. Basset studied Psychology under Drs. Watson and Dunlap, Psychiatry under Dr. Meyer, Genetics under Dr. Jennings, and Neurology under Drs. Hall and Sabin.





